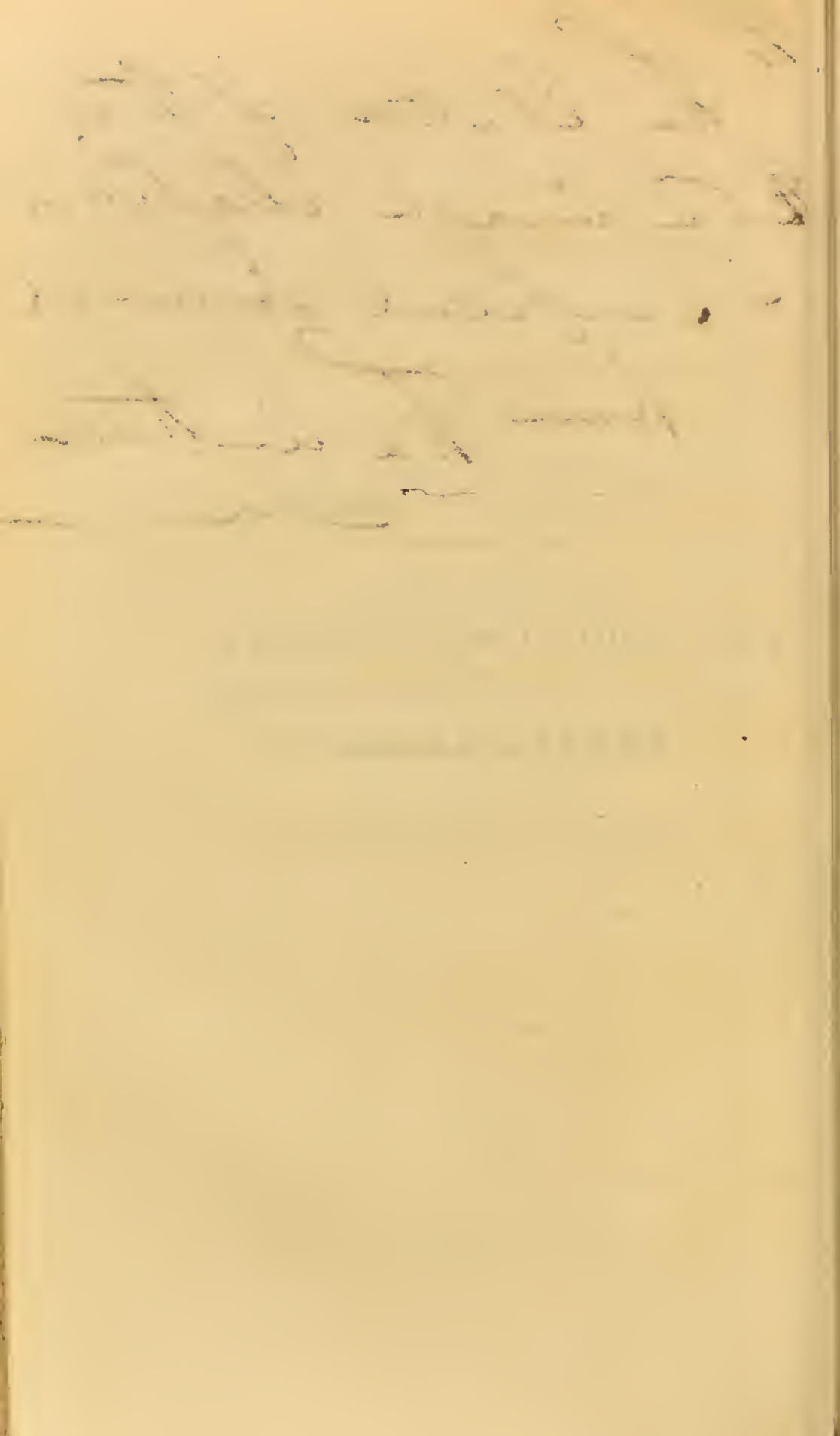


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To The Editor of the
Edinburgh Medical
& Surgical Journal
from The Author

ON
THE MEDICAL MANAGEMENT
OF
INDIAN JAILS.



A REPORT
ON
THE MEDICAL MANAGEMENT OF
THE NATIVE JAILS
THROUGHOUT
THE TERRITORIES SUBJECT TO THE GOVERNMENTS OF
FORT WILLIAM AND AGRA.

TO WHICH ARE ADDED,
SOME OBSERVATIONS,
ON
THE PRINCIPAL DISEASES, TO WHICH NATIVE PRISONERS
ARE LIABLE.

THE WHOLE COMPILED, IN A GREAT MEASURE, FROM DOCUMENTS
IN THE OFFICE OF THE MEDICAL BOARD.

BY
JAMES HUTCHINSON, A. M.

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OF THE MEDICAL AND PHYSICAL SOCIETY OF CALCUTTA;
SURGEON ON THE BENGAL ESTABLISHMENT;
AND SECRETARY TO THE MEDICAL BOARD
OF THAT PRESIDENCY.

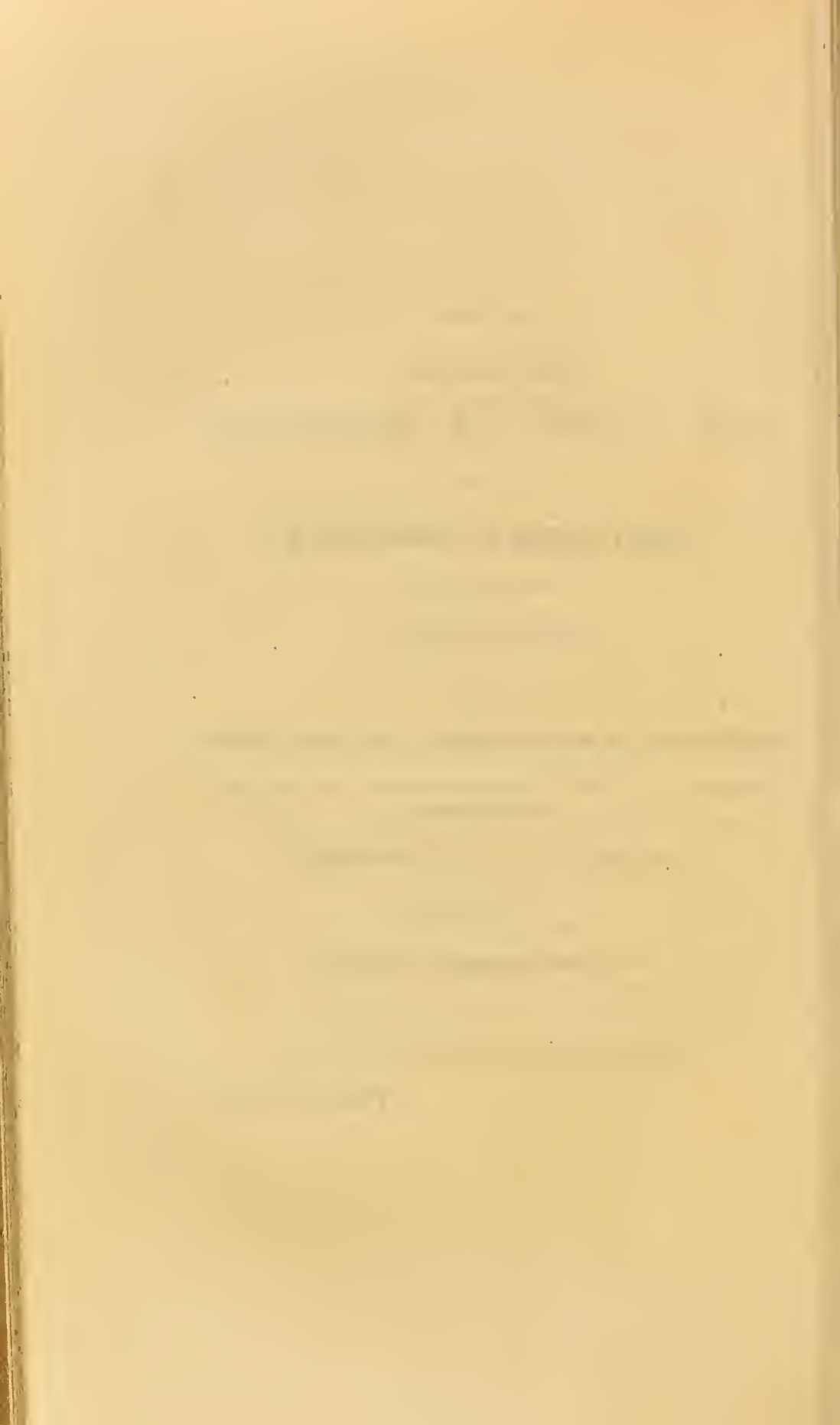
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1835.

R35590

TO THE
HONORABLE
THE COURT OF DIRECTORS
OF THE
EAST-INDIA COMPANY,
THE FOLLOWING
OBSERVATIONS,
ON THE
MEDICAL MANAGEMENT OF THE JAILS
THROUGHOUT THE GREATER PORTION OF THE VAST
TERRITORIES
SUBJECT TO THEIR GOVERNMENT,
ARE INSCRIBED,
WITH EVERY SENTIMENT OF RESPECT,
BY
THEIR MOST OBEDIENT AND HUMBLE SERVANT,
THE AUTHOR.



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PREFACE.

IT will readily be observed, in perusing the following observations, that they were originally intended to form an introduction to a larger work, which should comprise, at full length, the whole of the replies received from Medical Officers to the Circular Letter of the Medical Board, on the subject of the great sickness prevailing in jails.

Several circumstances, however, concurred to prevent this intention from being carried into execution. The expense would have been great : the variety of the information, which the volume would have contained, would scarcely have possessed sufficient interest to attract the general reader : the Government could hardly have been expected to act on the suggestions, it might have contained ; unless they had come before it, in

a more formal manner, supported by the civil authorities : and finally, supposing the Government entertained a desire to do so, it had at all times the power to call for the original documents.

For these various reasons, it was deemed inexpedient to incur the expense of publishing the whole of the communications, on which the present Report is founded ; at the same time, the necessity was strongly felt of acknowledging, in some manner, the very valuable information, which had been so freely, and so cheerfully contributed by the Medical Service generally, and more especially by the Medical Officers, at that time, attached to Civil Stations.

The names of those, whose contributions appeared the most valuable, or to throw new light, on any particular point of the subject of inquiry, have accordingly been recorded in the body of the work ; that there are others, the value of whose communications has not been sufficiently acknowledged, though fully appreciated, is true. This is to be regretted ; it arose however from no

wilful neglect, but from the impression, which I have before mentioned, I entertained, at the time of writing the Report, that I should be able to publish the whole of the documents on which it is founded.

I have endeavoured to make some reparation for the omission by prefixing a list, containing the names of the whole of those, who addressed the Medical Board on the subject.

That my portion of the task has been very indifferently executed, I am well aware; and likewise, that it is but a poor excuse to offer in extenuation, that the Report has been printed from the original rough draft: I am not without hopes, however, that it may be productive of benefit, and I shall trust, that a future opportunity will enable me to present it to the public, in a form more worthy of their approbation.

Chowringhee, }
June 26, 1835. }

A List of the Medical Officers, from whose communications, the following Report has been principally compiled.

Names.	Rank.	Stations.
J. LANGSTAFF,.....	Offg. Supg. Surgeon,	Presidency.
F. P. STRONG,.....	Assistant Surgeon,	4-Pargunnahs.
G. LAMB,.....	Surgeon,	Dacca.
T. W. BURT,	Assistant Surgeon,	Furridpore.
D. BROWN,	Ditto ditto,	Sylhet.
C. W. FULLER,	Ditto ditto,	Beerbhoom.
H. CHAPMAN,	Ditto ditto,	Chirra Poonji.
J. PAGAN,	Ditto ditto,	Rungpore.
G. G. MCPHERSON,..	Surgeon,	Moorshedabad.
W. A. GREEN,.....	Assistant Surgeon,	Mymensing,
J. LAMB,	Ditto ditto,	Maldah.
A. KEAN,.....	Ditto ditto,	Bauleah.
J. INNES,.....	Ditto ditto,	Bhaugulpore.
R. RANKIN,.....	Ditto ditto,	Sarun.
J. McRAE,	Ditto ditto,	Monghyr.
J. STOKES,	Ditto ditto,	Hummeerpore.
C. MADDEN,.....	Ditto ditto,	Futtehpore.
H. GUTHRIE,	Surgeon.	late of Allahabad.
J. HERVEY,	Assistant Surgeon,	Bandah.
A. BEATTIE,.....	Ditto ditto,	Allahabad.
W. P. ANDREW,	Ditto ditto,	Mynpooree.
D. RUSSEL,	Ditto ditto,	Panniput.
A. A. McANALLY, ..	Ditto ditto,	Hissar.
R. LAUGHTON,.....	Ditto ditto,	Amballah.
G. G. SPILSBURY, ..	Surgeon,	Jubbulpore.
CHRIST. GARBETT, ..	Assistant Surgeon,	Seonee.
R. H. IRVINE,.....	Ditto ditto,	Hussingabad.
H. M. GALT,	Ditto ditto,	Nursingpore.
J. DUNCAN,	Ditto ditto,	Beawur.
W. A. VENOUR,	Supg. Surgeon, ..	Neemuch.
T. TWEEDIE.	Ditto ditto,	Cawnpore.

ON

THE MEDICAL MANAGEMENT

OF

INDIAN JAILS.

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OF
INDIAN JAILS.

CHAPTER I.

Introductory Observations.—Comparative Rate of Mortality among Prisoners.—Circular Letter of the Medical Board.—Character of the Replies received.—Heads under which the subject will be considered.

I AM sensible, that in preparing the following summary, I am doing nothing more than the duty, which I owe from my official situation to Government, and to the community at large; that duty I trust I shall be found ever ready to perform, with alacrity and cheerfulness, to the best of my ability. On the present occasion I enter on it with more than common pleasure, from the hope, that I may assist in awakening attention to the subject, and thus prove the means of alleviating the sufferings of an extensive and unfortunate class of persons. There are few perhaps aware how extensive that class is, and that at any given period, there are not fewer than from thirty-six to forty thousand persons under confinement, in

various jails throughout the Presidencies of Fort William and Agra. Were I to enumerate the whole of those, who suffer confinement in the course of a year, the number would be of course greatly enhanced.

There are some, I am aware, who consider that the class of persons, to whom I allude, are unworthy of consideration, and that as convicted criminals, they are already too humanely treated. The number who reason in this manner is probably but few. The enlightened spirit of the times, in which we have the happiness to live, while it has enlarged the views and powers of the human understanding, has likewise purified and refined the feelings of the heart. An abhorrence of vice, real or assumed, ostentatiously obtruded on public observation, has accordingly ceased to be received as an indication of the possession, much less as an adequate substitute for the practice, of Christian charity and virtue.

I shall take it then for granted, that with the generality of mankind, no apology will be considered necessary, for endeavouring to do good to my fellow creatures, under whatever circumstances placed ; and with those who think differently, it may form some palliation of my offence, that a great number of those under confinement in the various jails of this country are incarcerated, not

for offences of a deep moral dye ; but for such, as in other countries we are apt to consider as emanating from the high and warlike spirit of the people ; in short, for asserting or defending those rights, which the miserably tardy course of civil justice has proved insufficient to protect.

I pretend not to be a Howard ; but were these men as criminal as they are represented to be, I should nevertheless feel called upon, by every sentiment of humanity, to ameliorate their condition to the utmost of my power, consistent with the due enforcement of the punishment awarded them ; for I hesitate not to assert it, as my opinion, that we can have no right to inflict a single pang, beyond that, to which these unfortunate individuals have been sentenced by a competent tribunal. There are few, who will read the distressing occurrences recorded in the following extract from the report of a medical officer, now deceased, nor feel inclined with me, to interfere to the best of his ability, to prevent the recurrence of scenes, painful even to read of, and which may be supposed to have diffused, at the time, anguish and misery among hundreds of surviving relatives.

During “ the first six months of 1829, fifty-nine deaths occurred, and during the succeeding six, one hundred and seven ;” and this too, be it observed, in a jail containing six hundred prisoners, or

less : But to return to the report: “ With reference to the extraordinary mortality and waste of human life exhibited in the returns of this hospital, I do not consider, that I am going beyond the limits of my duty, in pressing on the attention of Government the propriety of some measure modifying the present penal regulations, so as to substitute some other punishment for that of long continued imprisonment, which in this jail, in so large a proportion of cases, has proved equivalent to a sentence of death.” The dreadful mortality recorded in this extract is perhaps unparalleled, and yet other instances of a nearly equally appalling nature might be cited, were there occasion for it ; my object, however, is neither to harrow up the feelings, nor to indulge in useless lamentations for the dead ; but to endeavour to benefit the living.

In comparing the rates of mortality, which prevail in our native army, and among the convicts in our jails, I do not mean to deny, that on some occasions, as for example in Arracan and Cachar, disease has committed frightful ravages among troops; in such instances, however, the sufferers have been located in a climate, which was foreign to them, and have necessarily been subjected to great exposure, and to privations of all sorts, in the performance of the service, on which they have been employed.

Nothing of this sort can either be fairly urged or admitted in extenuation of the mortality in jails, the prisoners in general residing in the climate, breathing the atmosphere, and using the kind of diet, to which they have been accustomed. But solitary or even occasional instances of sickness and mortality scarcely form a fair criterion, by which to judge, and on the present occasion they need not be referred to ; for we know, that while the highest rate of mortality in the native army has been only a little above two per cent., and that only in a solitary instance ; a mortality of 25 per cent : is not unusual among convicts ; and that while the average mortality throughout the whole of the native troops, during the past year, has been scarcely one per cent., that amongst the convicts under confinement in our jails, has been little less than seven per cent. A little reflection will satisfy us, that a certain degree of difference might be expected from the advantages, which the sepoys of our army comparatively enjoy. They are men generally in the prime of life, and of the most robust and athletic forms ; they are provided for on the Invalid Establishment, when they become incapacitated from age, or from confirmed disease, for farther effective service ; and finally, it is not impossible, that a portion of the mortality, which actually takes place

amongst this class of persons, is not made to appear, from their being permitted occasionally to visit their homes for change of air, when their health is in an unpromising state. To counterbalance this, it may be mentioned, that hopeless cases of disease among convicts are sometimes got rid of, by the casual expiration of their periods of confinement. From these premises, it would appear, that age is the principal point, in which we ought to consider our native troops to have the advantage over convicts, in so far as health is concerned ; the difference however, in the mortality prevailing in the two classes, is too striking to be attributed solely to this cause : were it otherwise, we should at least expect, that the comparative rate of mortality, whatever it might be, should be uniform.

This is however far from being the case, for while the mortality among the prisoners in the Benares circle, and to the west of it, has been less than four per cent : during the past year, among those in Bengal Proper, it has been upwards of ten per cent. It is clear then, that we must look to some other cause for the great difference, which exists in the rates of mortality, prevailing among our native troops and the inmates of our jails, in addition to those, we have already mentioned.

In maintaining the comparison, I have hitherto purposely refrained from taking into consideration

the advantages, which the former possess, in being better fed, better clothed, and less exposed to the inclemencies of the weather ; for it appeared to me, that in carrying a sentence of incarceration into effect, we could have no right to accompany it with such severity of treatment, as to peril the life of the unfortunate individual. It is not impossible, however, that some causes of the nature hinted at are in operation ; for in the Upper Provinces, where the inhabitants are a hardier race, the diet more invigorating, and the climate more salubrious, the mortality, we have seen, is not strikingly great ; while in Bengal, where the reverse of all these is the case, where the population are feeble and degenerate, the diet poor and innutritious, where the slightest exposure is followed by fevers, the sequelæ of which are not got rid of for years, it is little less than frightful. The inhabitants of the country notwithstanding enjoy a very tolerable share of health, and the climate, with all its imperfections, being that to which the prisoners have been accustomed, they ought with adequate precautions to be able to withstand it ; that they are not, would seem to indicate that some defect in our system of jail management exists.

In corroboration of such a supposition, it may be stated, that the rate of mortality varies considerably in jails, not otherwise very dissimilarly

situated ; and that it has not unfrequently been remarked by those, who appeared to be close observers, that the mortality, which prevails among debtors, females, and convicts not sentenced to hard labour, is much less, than that among those, of whose sentence hard labour on the roads constitutes a portion. A consideration of these various circumstances, seeming to hold out a hope, that by the adoption of judicious measures, the sufferings of an extensive and unfortunate class of human beings might be alleviated, the Medical Board, with that humanity, which I trust will ever mark their proceedings, issued the following circular to the whole of the medical officers serving under this Presidency ; but more particularly to those attached to civil stations, and in charge of jail hospitals.

(No. 598.)

(CIRCULAR.)

To the Superintending Surgeons of Divisions.

SIR,

December 8th, 1833.

“ The Medical Board have observed with extreme regret the great mortality which prevails among the convicts under confinement, in the various jails throughout the country, but more particularly in those situated in the province of Bengal.

“ It would not, perhaps, be unreasonable to expect, from persons of the above class, being nearly of all ages, and otherwise less favourably circumstanced, that a greater mortality should prevail among them, than among the native troops ; still the difference is so great, and so striking, that the Board are inclined to believe, by the adoption of judicious measures of a general nature, that it might be diminished.

“ Actuated by this impression, I have been directed to request, that you will call on all the Medical Staff within your division, but more particularly on those attached to Civil Stations, to explain the causes, to which in their opinion the great rate of mortality, (in some instances averaging upwards of $2\frac{1}{2}$ per cent. throughout a division, during one quarter,) is to be ascribed.

“ In conducting the investigation, the Board trust, that it will not be omitted to consider the influence, which the mode of working, dieting, clothing, and housing this unfortunate class of persons may reasonably be supposed to exert on their state of health.

“ Under the last head, the Board request, that Medical Officers will state the average area of cubic feet, which is allowed to each prisoner in jail, and to each patient in hospital ; whether ventilation is adequately attended to ; and if, in

their opinion, there is any thing objectionable in the site of the jail, or around it.

“ Their attention is likewise requested to the mode, in which their respective jails are constructed, and they are requested to state, whether they consider floors made of stone flags or puckah work objectionable, with reference to the domestic habits of the natives. The mode of roofing is likewise not to be forgotten, and Medical Officers will have the goodness to observe, if they consider the flat, vaulted, and Assyrian roofs unobjectionable in hospitals, or whether, in their opinion, a roof composed of a thin layer of clay or *chuppur* laid upon mats, and afterwards covered with tiles, would not be preferable, and more likely to be congenial to the native habits and constitution.

“ The Board are inclined to think, that a certain influence may be ascribed to change of climate, (convicts being occasionally brought from hilly tracts, and confined in jails situated in the plains;) to a change of domestic habits from mere confinement, to a deprivation of spirituous liquors or intoxicating drugs, to which many of these persons have been accustomed; a certain influence is likewise probably to be attributed to the action of the depressing passions, and this perhaps could be proved, by an accurate examination of jail records. On all these points, however, the sentiments of Medical Staff are requested.

“ Along with their replies, Medical Officers will have the goodness to forward a statement of the mortality, which has taken place in the jails, at the stations, to which they are severally attached, for the last five years, distinguishing each year, and giving the average number of prisoners for that period ; and, at the same time, to state to which of the foregoing, or any other causes, they are inclined to attribute the mortality, or a portion of it.

“ The Board expect, that Medical Officers at the same time will point out any means, which appear to them calculated to reduce the rate of mortality, and they rely on Superintending Surgeons of divisions favoring them with the result of their experience, on a subject so interesting to every feeling of humanity, and so imperatively calling for investigation.

I have, &c.

(Signed) JAMES HUTCHINSON,
Secy. Med. Board.

This appeal was answered, as might have been expected, in such a cause, by nearly the whole of the Medical Officers attached to Civil Stations, and in a manner, which reflected the highest credit on them. Where the reports of all are so excellent, it may seem invidious, if not presumptuous, in me to draw attention to those of particular individuals, and yet, I can scarcely refrain from

noticing the great merit of those of Dr. Lamb of Dacca, Mr. Macpherson of Moorshedabad, and more especially of his Assistant, Mr. Kean, then officiating in Medical charge of the Civil Station of Bauleah. Having been permitted to examine the whole of these documents by the Medical Board, it is my intention on the present occasion to make use, in the freest manner, of the funds of information thus kindly placed at my disposal ; to draw as largely as I can, on my own experience in the management of jail hospitals ; to avail myself of the valuable suggestions, which have been made to me, from time to time, on the subject, by the Members of the Board ; and from the whole of these sources, to compile a report on the management of jails and jail hospitals generally, leaving the reports of individual Medical Officers to point out the deficiencies, and imperfections of the particular establishments, of which they were in charge at the time.

In carrying these intentions into effect, I shall offer a few preliminary observations, on the evils attendant on incarceration generally ; then consider the subject more in detail, under the different heads of housing, working, dieting, and clothing native prisoners ; and finally touch on the general management of jail hospitals, and of the treatment of some of the most important diseases, which infest them.

CHAPTER II.

Of the Statistics of Indian Jails, and of the evils, necessary and contingent, attendant on incarceration.

THE statistical information contained in the report of Mr. Assistant Surgeon Kean is so particularly valuable, that I shall readily be excused for enriching my pages with it, particularly as it may be considered an epitomè of the statistics of Indian jails generally, in the absence of materials, from which that information could be with accuracy compiled.

“There are at present,” Mr. Kean remarks, “five hundred and forty-eight persons under confinement in the jail at Bauleah.”

	Hindoos.		Mussulman.		Total.	Remarks.
	Males.	Femls.	Males.	Femls.		
Convicts, condemned to labor,	71	4	224	6	305	} 383
Convicts exempted from labor ..	41	1	33	3	78	
Debtors,.....	15	1	27	0	43	
Persons not tried or not yet examined by the commissioner,..	36	1	80	5	122	
	163		364			
	7	7	14	14	548	
	170		378			

“ If we consider those, whose cases have not been decided, as convicts, the proportion of convicts to debtors will be nearly as 12 to 1, and that of Mussulman convicts to Hindoo convicts, more than 2 to 1. If not so considered, the proportion will be—

Convicts to Debtors, nearly as 9 to 1
 Mussulman Convicts to Hindoo Convicts, as 2 to 1
 Mussulman Debtors to Hindoo Debtors, as $1\frac{3}{4}$ to 1
 Mussulmans to Hindoos, more than 2 to 1
 Males to Females, as 25 to 1

“ The following exhibits the number of our sick at present:

Convicts.			Debtors		
	Male.	Females.		Males.	Females.
Hindoos, ..	12	0	Hindoos, ..	1	0
Mussulmans,	16	0	Mussulmans,	0	0
	28	0		1	0

“ Thus at a time, when the jail is considered healthy, out of 548 prisoners, 29 are sick, or about 1 of every 19.

Out of 12 Females, there are 0 sick.

„ 43 Debtors, 1 „ or 1 in 43
 „ 505 Convicts, and untried,... 28 „ 1 18
 „ 378 Mussulmans,..... 16 „ 1 $23\frac{1}{2}$
 „ 170 Hindoos,..... 13 „ 1 13
 „ 78 Non-labouring convicts, 2 „ 1 39
 „ 305 Labouring convicts,..... 26 „ 1 $11\frac{3}{4}$

“ This is not the proportion of the mortality, but of the men in hospital, and of course those, who are obliged to labor, are fonder than others, of coming into hospital for trifling causes, such as chafing from the irons, &c. to which they are more liable, and if not shamming, are not discouraged.”

The reader will do well to bear in mind the information contained in this extract, as he will find, that it is more than once referred to, in the course of the following pages, and that in several instances, the conclusions drawn are to a certain extent founded on it, or in some way connected with it.

Confinement in jail may be said to be almost the universal punishment in India. For all crimes of a more heinous nature, it almost necessarily forms a portion of the penalty, and for those of the slightest nature, it is almost impossible to dispense with it, corporal punishment having been abolished by law, and the natives of India being either generally so poor, or so addicted to money, that it is impossible to get the lower orders of them to pay a fine of even the most trifling amount. Though imprisonment in jail would thus appear to be forced on our adoption, as a mode of punishing offenders against the law, there can be little doubt, that it is not a judicious one. A numerous class of persons are thus removed from

the management of their families, and of their private affairs ; they are employed on works, and in a mode, by which their labour is rendered comparatively unproductive ; there is too much reason to believe, that our convicts, by the time they come to leave our jails, are not improved in their morals ; the punishment is too frequently had recourse to, to be attended with great disgrace ; and finally, it possesses the great disadvantage of inflicting a much greater degree of suffering, than it appears to others actually to do.

That incarceration to the natives of India is attended with much misery can scarcely be doubted. There are few of them, who are not married and have families ; from these they are necessarily separated, and it too frequently happens, that they have to leave them to indigence and beggary. There are too the anxiety and suspense before trial, and the utter ruin entailed by bribing almost every individual, with whom they are brought into contact, both before and after it. It will be judged then, and there is scarcely reason to doubt of the accuracy of the supposition, that there is great room for the depressing passions to exert a powerful and deleterious influence, on the health of the class of persons under consideration. It is true, that the power of the native of enduring suffering often enables

him to bear up comparatively well, when in health ; but when that support gives way, these powerful agents, in the production of disease, exert their influence with redoubled effect.

Akin to these domestic anxieties, the result of separation from those held most dear, may be reckoned a still more powerful agent. I allude to extreme changes of climate or mode of life. To incarcerate the inhabitant of the hilly tracts of Ramghur or Bhaugulpore, (and there are many other districts, of which the same thing might be said,) in a jail situated in the plains, is tantamount to condemning him to death. The climate is different from that, to which he has been accustomed ; but more than that, these untutored beings have been accustomed to a mode of life nearly as roving, as that of the wild beasts, which infest the countries, they inhabit. In such cases, disease and the depressing passions operate with almost uncontrollable power ; for change of climate itself, and that too in instances, in which we would *a priori* be little apt to suspect its influence, is a fruitful source of disease. We might expect, that a change from the plains to the hills would be equally beneficial to a native of the former, as to ourselves ; and yet it is not so ; for a residence in the hills is little less injurious to him, than a residence in the plains is to the half-savage inhabitant of a mountainous

region. The means of avoiding this baneful and destructive influence is not difficult, and yet perhaps in many instances, it has not been had recourse to; until a degree of mischief, shocking to every feeling of humanity, has been committed. It is almost superfluous to say, that the prophylactic measure hinted at, is the establishment of a subsidiary jail in a suitable part of the country, under the medical management of an able and intelligent native doctor. The following sentiments conveyed in a report to Government, from the late Mr. Scott, Commissioner in Assam, are too much in unison with those, which have been already expressed, to be omitted in this place. Speaking of the great mortality, which took place at Gowhattee in Assam, in 1829-30, Mr. Scott remarks: "The evil I shall endeavour to mitigate, by removing as many prisoners as possible into the hills, where the deaths are much less frequent, than at Gowhattee; but I cannot conceal from His Lordship in Council, that after past experience, I can entertain no reasonable hope of any material reduction of mortality taking place amongst those, who must necessarily remain in Assam, and who cannot, at the most moderate computation, amount to less than four hundred."

To the natives incarceration brings with it, likewise, a total change of habits. The number of their

daily meals, and the hours of taking them, are altered ; their modes and hours of labour, and the whole of their domestic economy : but these are topics which will be discussed, at full length, under their appropriate heads. In addition to these, many of the inmates of our jails have been accustomed to the use, or rather to the abuse, of spirituous liquors, or to that of some other intoxicating drug, and suffer afterwards in confinement, more or less, from the want of it. In many of the districts of Bengal, and in other parts of India, Opium would appear to be extensively used by the natives, and experience would seem to prove, that no opium-eater, of any standing, can be altogether, and at once deprived of this drug, without the most pernicious and detrimental effects to his health. The symptoms, resulting from the deprivation of this drug to those accustomed to its use, appear to be similar, but in an aggravated degree, to those resulting from discontinuing the use of tobacco, or any other powerful narcotic stimulant. The unfortunate person is overpowered by feelings of listlessness and languor, the mental powers become less acute, and these symptoms are sooner or later, in the opium-eater, followed by an irritable state of the *primæ viæ*, which, if not speedily attended to, and corrected, at no great distance

of time, hurries the victim to his grave*. Under such circumstances, it is not exactly an easy

* The following account of the symptoms resulting from the deprivation of opium in those, who have been accustomed to its use, from the pen of Dr. Lamb of Dacca, is so graphic, that no apology is necessary for transferring it to my pages : “ At first, when the loss of the accustomed stimulus is felt, there is depression of spirits, languor, yawning, giddiness, discharge of water from the eyes, pains in the limbs, burning of the hands and feet ; then succeed slight twitchings of the tendons, loss of appetite, tumidity of the abdomen, costiveness, pain at the umbilicus, and lastly looseness, especially at night ; and want of sleep. These symptoms in many cases continue for months, till the constitution overcomes the evil partially or entirely. Of the number I examined, only two men asserted, that they had experienced all the symptoms above described, and recovered their strength and appetite, and afterwards felt no inclination to revert to their old habits. The remainder were still suffering, in proportion to the length of time, they had been habituated to the drug.”

For farther information on this subject, see Dr. Lamb's report on the sickness prevailing at Gowhattee, from which it appears, that opium is extensively used in the eastern districts of Bengal. Whether in the eastern or the western hemisphere, the same love of inebriation marks the approach to the savage state. Were it confined to this state, we should be less inclined to complain ; but alas ! it would appear from Dr. Lamb's account, that in the town of Dacca alone, upwards of one maund or eighty pounds weight of opium is monthly purchased of the Government, by the licensed venders of this valuable, but abused drug.

matter to determine how to act. It is scarcely accordant with our opinions of propriety, to encourage, or even to tolerate, the use of this pernicious drug, or any other possessing similar properties, among prisoners; we have, however, but a choice of evils, and it is perhaps better to wink at the practice, than to witness the numerous victims, who would otherwise fall sacrifices to this degrading habit. The observations of Dr. Tweedie and Dr. Lamb of Dacca are authoritative on this subject, and we have only to take care, that the accustomed stimulant is not too suddenly withdrawn, or too long withheld. For my part, in districts, in which the use of opium is general, I would permit the drug to be sold to those accustomed to it, in the same manner, as tobacco or any other article of the sort; that is, so long as the prisoners are allowed rations in money: should however a change in that respect hereafter be made, perhaps it might, with more propriety, be left to the medical establishment to provide for the wants of such persons.

CHAPTER III.

Of the Housing of Prisoners.

BUT it is now time, that we should proceed to the several principal heads, which have been laid down for our consideration, in treating of this subject. The first of these in order, which presents itself, is the housing of prisoners. It is almost supererogatory to remark, that every jail ought to be situated in an elevated, dry, and open exposure, at a distance from all swamps, jheels, and rice-grounds, or any thing else, such as jungle, likely to generate malaria. The ground around it, ought, at the same time, to be kept clear, and nothing like an unnecessary body of water, or broken ground likely to harbour filth of any description, suffered to exist in the neighbourhood. Every jail, at the same time, ought to be able to command a full and free supply of good pure water. The building ought of course to be spacious, in proportion to the number it is intended to contain. The following remarks from the pen of the late Dr. Hennen, on a subject not very dissimilar to the present, are highly interesting and appropriate, and far more instructive, than any thing, I could offer of my own, on the subject.

“In calculating the accommodation of an hospital, the rooms should be appropriated to the number of patients, by measurement, or estimate of the number of cubic feet in each ; thus, a room 10 feet high, 16 long, and 10 broad, contains 1600 cubic feet. Allowing 800 cubic feet for each patient, such a ward will accomodate two extremely well. Sometimes we are forced to occupy smaller bounds, and in a room of the dimensions described, we would be obliged to place three beds, thus reducing the allowance of air very considerably. It should be a general rule, that where there are any fractional parts above the specific allowance, such fractions should be always allowed, as an equivalent to the portion of air displaced by the bedsteads, tables, forms, &c. Whatever the height or cubic contents of a room may be, each bed should have a space of at least 6 feet by 6, or 36 superficial square ; in rooms with low ceilings, 8 by 8, or 64 feet, and as much more as possible : the beds should never touch each other, or be distributed in pairs, as is sometimes to be seen in civil hospitals. An invariable rule should be, never to crowd, and to let each bedstead be completely isolated, without communication with either walls, pillars, or the other beds in its neighbourhood ; to place it out of a direct current, affecting the body of the

person who lies in it, but to admit as much air as possible above, below, and around it ; to shift it often, so as to clean beneath it ; and, whenever it can be done, to remove the bedding, and let it remain in the open air, or else to fold it up, in such a manner, that the air may freely perflate it, while it lies unoccupied on the bedstead. Tenon, from whose work a vast deal of useful information may be derived, states, as the lowest allowance proper for each convalescent patient, $6\frac{1}{2}$ cubic French toises, each toise equal to 76·734 English inches, and 7 cubic toises for each sick patient, and, in proportion as that allowance has been greater, so, he says, has been the healthfulness of the hospital*. I should recommend never to crowd patients, under any circumstances, where it can be avoided, in a space of less extent, than the highest recommended by Tenon, and, if possible, to give them 800 cubic feet of air, except the means of ventilation by cross windows, doors, fire-places, &c. are peculiarly good†.”

From the replies of Medical Officers to the circular of the Medical Board ; it would appear, that in very few of the jails in India is the allowance of

* See Tenon, *Memoires sur les Hospitaux de Paris*, 4to. Paris, 1788, p. 193, et seq. Universal experience proves the justice of Tenon's remark.

† Vide Hennen's *Principles of Military Surgery*, page 52.

air to each prisoner above five hundred cubic feet—a proportion, which I am inclined to think, considerably too small. In some instances, the space is said to be even less than three hundred, an allowance, which would be so small, that it is impossible to conceive, that the statement has not arisen, from some oversight or mistake in making the calculation. The subject is one of great importance, and worthy of farther investigation; for, if under such circumstances, unusual sickness and mortality should prevail, it is only what the warning voice of the most experienced writers has taught us to expect.

We have seen, that in the military hospitals of Europe, from six hundred to nine hundred cubic feet of air are considered necessary, for each individual; and I am not prepared to say, that much less should be made to suffice in this country. It is true, that in India the temperature of the atmosphere is higher, and that the diet of the inhabitants partakes more of a vegetable nature, both of which circumstances would appear to render a less supply of oxygen necessary*; but on the other hand, the air being more

* It is not improbable, that the high atmospheric temperature in India does not much affect the consumption of oxygen, as the animal heat generated is so rapidly carried off by perspiration, and consequent evaporation.

rare may naturally be supposed, in a given space, to contain a smaller proportion of that essential to life*. In India, no doubt, from the structure of our dwellings the circulation of air is much more free, which would appear to be a positive advantage, which we possess over the inhabitants of colder climates, and ought accordingly to render a somewhat smaller allowance of space adequate to the preservation of health; I question, however, if this ought ever to be reduced below six hundred cubic feet, per man.

Next in importance to every jail's containing adequate space, is, that its wards should be freely perflated. In fact, the ventilation of jails, and jail hospitals is a subject, on which too much attention cannot be bestowed. It is essential on the one hand, that the prisoners should not be unnecessarily exposed to the vicissitudes and inclemencies of the weather, and on the other, that they should have the means of breathing a pure and wholesome atmosphere. The wards of our jails are generally well provided with door-ways, and were the side-walls, on each side of the beams, generally perforated, so as to allow the heated air to escape,

* The difference is said to be equal to a twentieth; so that a human being *cæteris paribus* would appear to require an allowance of one twentieth more of atmospheric air, for the due support of life in India, than in Europe.

and to occasion some little current, perhaps little, in this respect, would remain to be desired.

Our Indian jails are generally surrounded by a high outer wall or enclosure, and if this is unfortunately built too near, it cannot do otherwise than effectually keep off any breeze, that there may be. There are few, even in the best ventilated houses, who have not, at certain seasons, experienced how almost insupportably oppressive the nights in India are, and who cannot consequently form some opinion of what suffering must be experienced, where perhaps a hundred human beings or upwards are crowded together, nearly as close as they can lie, in a ward almost inaccessible to the air. I should be sorry, however, to be understood to be an enemy to the high outer wall or enclosure. If built at a sufficient distance from the wards of the jail, it is often highly advantageous, as adding greatly to security against escape, and thus admitting of a degree of liberty being given to the prisoners, when the jail happens to be crowded, or the season exceedingly sultry at night, which cannot fail of being highly conducive to their health. I have heard of instances in point, though not on medical authority, where sickness prevailed to a great extent during the hot-season, and where it was effectually checked, by allowing the prisoners to

sleep in the open area, around the jail, a prophylactic measure, which I would strongly recommend to be adopted, in all practicable cases, wherever unusual sickness can be supposed to arise from a too crowded state. From the report of Dr. Lamb, it would appear, that from the want of a high protecting wall of the sort, the prisoners at the civil station of Maldah are strung every night in a body, on an iron chain; a measure of precaution, which, however necessary, cannot be otherwise than shocking to the feelings of humanity, particularly where the remedy is so easy of attainment. The word chain falls gratingly on the ear, especially of an European, and I doubt not, that the moment this meets the eye of authority, it will be the last opportunity, which will offer of making a similar complaint.

With the appearance and construction of our jails, there would appear to the superficial observer to be less cause to find fault, than with any other portion of our jail system; and yet such is not the case. It is true, that these structures are in many instances more like palaces than jails, and yet they might perhaps, notwithstanding the humane and munificent intentions of Government, be more aptly compared to splendid sepulchres; the buildings are solid and imposing in appearance, but they are too often, if not

generally, ill adapted to the purposes contemplated, or for the inmates, whom they are intended to contain. The reason of this I hope to be able to make sufficiently apparent, in the course of these remarks. The natives of India, or that portion of them, of which the inmates of our jails principally consist, are accustomed to sleep in the hot-season, in the open air, and during the rains, and cold-season or winter, in small huts, which cannot fail to be exceedingly warm. In either case, they sleep on the bare ground, which being an indifferent conductor of caloric very rapidly becomes of the same temperature as themselves. The very reverse of this is the case in jail. The floors are often not sufficiently raised, and are in consequence naturally damp. They consist either of stone, of tiles, or of masonry plastered over, so as to present a smooth and well polished surface ; this latter description, we are in the habit of calling a *puckah* floor or terrace. For purposes of cleanliness, it must be admitted, that these are admirably calculated, particularly the first and last ; but when we come to consider them in a medical point of view, and to reflect, that the convicts sleep on these floors, with generally no covering whatever ; but the *dhotee* or cloth around their loins, the case is very different. The three different

kinds of floor all attract moisture from the atmosphere in great quantity, so that it cannot be particularly safe to sleep on them, at any time; but much less so, when the air is loaded with moisture, or when the temperature happens to be low. The natives of India, and those of Bengal in particular, are a weakly race, and at such seasons, the little animal heat, which they generate, is carried off by these floors, as speedily as formed, and their health suffers proportionally in consequence. If it is attempted to remedy this state of things, by the introduction of country *charpoys*, we have other difficulties to contend with. The natives have a great aversion to them, and to say the truth, there is great reason, why they should not like them. The bottom being composed of an open netting of country twine, and the native having no bed clothes, he is thus elevated from the ground, as it were, and exposed on all sides, to every breeze that can blow. They are besides open to other objections, which will be pointed out hereafter from the very faulty and imperfect manner, in which they are generally constructed.

Mr. Kean appears clearly to have seen the great objection, to which the present modes of flooring are open, in the respect now under consideration, and he attempted to remedy it, by co-

vering the floor with a coating of earth, a measure, which was undoubtedly well calculated to effect the object in view, by rendering the floor a much inferior conductor of caloric, and much less liable to be affected by the vicissitudes of the weather. It cannot be denied however, that the plan in question is not well adapted, for purposes of cleanliness, and that in consequence, it is itself open to objection. The rapid abstraction of caloric from the body is not however the sole evil, to which sleeping on the floor conduces. In a crowded jail, the atmosphere very soon becomes contaminated, and the noxious gases or effluvia, being heavier than the other constituents of the atmosphere, gravitate, and thus expose the inmates to breathe a tainted and vitiated air. This double objection to sleeping on the floor, it has been proposed to obviate, by the introduction of *muchauns* or raised platforms of bamboo, on which the prisoners might sleep, and it is impossible to deny, that it would, in some respects, be an essential improvement. Such platforms however, not being moveable, are apt to conceal dust and dirt of all sorts, and are consequently ill adapted either for jails or for hospitals ; they are besides, in common with the country *charpoy*, open to the objection of harbouring bugs and vermin, which sometimes interfere essentially with the comfort of the sick.

Fortunately a substitute is not very difficult to be obtained, and one, which I have no hesitation in saying, would answer the purpose in every respect, without being open to a single objection, that I am aware of, not even to that of expense. The measure proposed is the introduction of boarded cots into all jails, and jail hospitals, but particularly into the latter. The advantages of boarded cots are numerous; they could be prepared, at a price very little exceeding that of the common country *charpoy*, and being of an uniform size, (say six feet four inches, by two feet ten inches, and fourteen inches high), they could be placed together, so as to form a continuous platform, and again separated, from time to time, as occasion might require, either for the purposes of cleanliness, or with the view of isolating a particular individual. The prisoners would thus be raised, in sleeping, above the deleterious effluvia, which hover along the floor; they would sleep on a dry non-conducting substance, not liable to be affected by the weather, and would thus be comparatively warm and comfortable. In addition to this, in sitting they would not be subjected, as they are at present, to rest their bare feet, on a cold stone or puccah floor, which cannot be otherwise than highly detrimental to persons, who have never before been accustomed to it.

There are few persons, who have seen a patient in the last or even the advanced stages of dysentery, his pulse perhaps so low, as only to be felt in the sun, with his feet projecting through the netting of the common *charpoy*, cold and without covering, who have not felt convinced of its unsuitableness for hospital purposes, jail or battalion; but particularly the former. Let Government then give a fair trial to boarded cots, which would be far more durable, and I am inclined to think, in the end less expensive, and if they are not found to answer, I shall be very much disappointed.

The several modes of roofing in use, in the construction of our jails, with reference to the native habits and constitution are perhaps not altogether unobjectionable; but when we come to consider, that security against escape must ever form a primary object of attention, and the miserable consequences, which could not fail to result, were fire to break out, we shall be satisfied, that the common flat terraced roof is to be preferred.

The wards, or rather the windows, of all jails, it is to be supposed, are provided with gratings of iron; whether these of themselves are sufficient, without any other sort of door, seems to be a matter of dispute. On the one hand, it is contended, that these door-ways, in addition to

the gratings, should be fitted with pannelled doors, as being more durable than any other, and more effectually enabling the inmates to admit the external air, or to exclude atmospheric vicissitudes, as reason and inclination might dictate. For this purpose, there can be no doubt, that they are admirably calculated. On the other hand, it is maintained, that these doors, furnish an ample means of the strong oppressing and extorting money from their weaker associates ; but surely men will not be found generally, nor even frequently to punish themselves, with the view of giving pain or annoyance to others. I should accordingly have no hesitation in giving it as my opinion, that pannelled doors would not only add to the comfort, but to the healthiness of prisoners.

To those, who are familiar with jails and jail hospitals in this country, it must be superfluous to say, that the floors of the wards, early in the morning, are often in a very loathsome and offensive state, evincing the necessity, in so far as health, decency and cleanliness are concerned, of devising some improvement, in the mode of providing for contingencies of the sort. To every ward, in my opinion, there ought to be attached a recess fitted with a copper trough or pan, to which such of the convicts as had occasion might resort at night ; it ought however to be entirely

separated, from the body of the ward, by a pannelled door, so as to be as little offensive as possible.

In addition to this, every ward ought to be lighted at night, so that the prisoners might be able to move about, or to assist each other in the event of sickness. For the same reason one or more of the police peons ought to be made to sleep in each of the wards, or close at hand, so as to be able to procure medical assistance, should it be required, without a moment's delay.

The necessity of cleanliness in all respects, but more especially in regard to the sewers in, and around jails, is so obvious, that I consider it unnecessary to enter at length on the subject. If these are allowed to fall into a dirty and offensive state, not only will cases of disease spring up, which would not otherwise have appeared ; but others, which had else been of a mild nature, will become comparatively intractable, and a vast increase of mortality will in consequence result.

All jails and jail hospitals ought to be adequately provided with cooking sheds, and the interior of the whole of the buildings ought to be white-washed throughout, at least once, in the course of each year : but it is now time, that we should proceed to the second general head, which we have laid down for our consideration.

CHAPTER IV.

Of the Working of Prisoners.

THE working of convicts, in this country, is one of the most important points connected with their management. To enable us to judge in some measure dispassionately on the subject, and of the quantity of labour, which ought to be exacted of them, let us consider what is performed by the peasantry of the country, whose lives, like those of the lower orders of all other countries, may be said to be comprised in one word, "Labour." The hired labourer of India either commences work, about half an hour after sunrise, and continues it, till 11 o'clock A. M., when he cooks a meal, and resumes his employment at 1 o'clock P. M. continuing it, till 5 o'clock P. M., or he commences at 10 o'clock A. M., and continues uninterruptedly at labour, till 5 o'clock, P. M. Let us compare this, with what is exacted of the convict. He is taken out of the jail at sun-rise, or before it; he labours uninterruptedly all day, with the exception of an hour perhaps at noon, (for I am not sure, that this indulgence is in every case allowed,) when he generally satisfies the cravings of hunger, with a lit-

tle parched gram* or rice, or perhaps with these grains in a perfectly raw state. He then continues to labour on, till 4 o'clock P. M., when he commences his return to the jail; but this may be at some distance, so that by the time he reaches it, and the whole of the prisoners are counted over, it is often near sun-set. They have then their sole meal to prepare and eat, before they are locked up for the night. All this, it is to be recollected, is exacted from a class of persons, who are frequently the most prone to disease, from their previous habits of dissipation; who are suffering much mental anxiety and distress; who are scantily fed; who enjoy no reward for their labour, and who in addition to every thing else, are working heavily ironed. Many of these persons too, be it remembered, are considerably advanced in years, and to a still greater number, the mode of labour, to which they are forced, is totally new and unaccustomed.

There are perhaps few men, until they have become in some measure used to it, who could continue on their legs, during the whole day, heavily ironed as these men are, even were no work whatever exacted of them: in short, we may attempt to disguise it from ourselves, as we like; but the impression is strong on my mind, that the

* A species of pulse.

convicts are overworked, and that many of them are destroyed in consequence.

From the following remarks of the Superintending Surgeon of the Agra circle, (vide his quarterly return of jail hospitals, dated the 1st October, 1834,) there would appear to be little doubt, but in his opinion, there is an unnecessary waste of life: "At Bulundshuhur," he observes, "the sickness and mortality among the prisoners on the Allahabad and Delhi road have been great, and I think, may be attributed to the following causes. They have been almost without clothing; the huts were not ready, till after the rains had for some time set in, consequently they must have been damp and unwholesome. I think also, that the vicissitudes of temperature, to which the prisoners are exposed, during the rains, is very detrimental to their health, and that until they are allowed to go during that season, to their respective zillahs, where they can have proper accommodation, the mortality will be always considerable."

Other quotations, more in point, might be added; but to what purpose. There is little doubt, that the mortality among non-working convicts, females and debtors, is much less, than among those condemned to labour. Mr. Kean's statistics show, that of 21 females, there were none sick; of 43 debtors, there was only one sick, or one in 43; and

among 78 non-labouring convicts, 2 sick, or 1 in 39 ; while of 305 *labouring convicts*, there were 26 sick, or 1 in $11\frac{3}{4}$. The mortality among these different classes, Mr. Kean was unfortunately not able to ascertain ; but if any doubt exist of the conclusion, which I have drawn, let returns of the comparative mortality prevailing, among the great gangs employed on the roads, and the convicts in the adjacent jails, be called for, or even among the different classes of prisoners in the same jails ; I for one shall be delighted to find, that I have been in error ; should such fortunately prove to be the case. Small detached working gangs are similarly situated, and frequently, if not generally, suffer in proportion. These are detached to a distance, with often no medical assistance*, and with only the number of police peons necessary for their custody. They are heavily worked, and perhaps badly paid ; and if one falls ill, the person in charge is either unable, to judge of the urgency of the case, or conveniently to spare the

* It gives me great pleasure to state, that since this was written, Government have most humanely ordered, on the suggestion of Colonel Galloway, of the Military Board, supported by the Medical Board, that a native doctor shall be allowed to every gang of upwards of 50 prisoners, which may happen to be detached for any length of time, beyond the reach of immediate assistance from an European medical officer.

necessary attendants to escort the sick person to the station hospital. The case is thus frequently allowed to assume such a form, as to render recovery doubtful, or even hopeless.

If the work of convicts be thus valuable, and occasionally productive of so deplorable results, we should at least expect, that it would be judiciously applied ; and yet there is great reason to believe, that this is frequently not the case. Sometimes they are obliged to walk for miles to their work, heavily fettered as they are, instead of being accomodated in tents close to it ; at others, they are unprofitably and unproductively employed, in carrying small baskets of bricks for the repair of the roads, for miles, when a hackery, which would carry as much as fifty of them, might be hired for a few annas. A reference to the able report of Mr. Macpherson will show, that this is no imaginary case.

From the replies of medical officers, it would likewise appear, that sufficient attention is not paid to the seasons, in the working of convicts. In the rains, they are generally, if not always taken out, unless it actually happens to rain at the time, they would otherwise be leaving the jail : they frequently come home drenched with rain, and few of them, I should suppose, are very well prepared with a change of apparel. Again, in the hot-season, too

little attention is paid to the excessive heats, that frequently prevail, and sporadic cases of Cholera, and Coup de Soleil are not unfrequent, in consequence.

In respect to the working of convicts then, there can be no doubt, that there is great room for improvement. Less, or at least not more, ought to be exacted of them, than the peasantry of the country are in the habit of performing. During two-thirds of the year, it will be quite sufficient, and as much as they are able to endure, if they are worked from sun-rise in the morning, till 11 o'clock A. M., and again, from 1 o'clock till 4 o'clock P. M.; and during the remaining third, or hot season, from sun-rise in the morning, till 10 o'clock A. M., and afterwards, from 3 till 5 o'clock P. M.; or what perhaps would be still better, if they were furnished at that season, and during the rains, with a portion of in-door occupation. A reference to the papers of Dr. Lamb of Dacca, and Mr. Burt of Furreedpore, will show the employments, which are considered most appropriate for prisoners in this country. These are unhusking rice, pounding bricks, the manufacture of baskets, mats, cloth, or generally, any other useful art, to which they may have been accustomed. Suitable sheds ought of course to be erected for their protection, while so employed.

I have purposely refrained from touching on the classification of prisoners ; because I have not considered it strictly to belong to the subject, which I have undertaken to discuss. I may remark, however, that the system of classifying them, according to the period of confinement awarded, scarcely appears to me to be a judicious one.

There is another point of considerable importance, in some measure, connected with the subject of the classification of prisoners, and that is, the weight of the fetters, which they ought to wear. In this respect, there ought either to be one uniform standard, or if a difference is considered to be advisable, it ought to be determinate, and fixed by the tribunal, by which the offender may be tried. By a reference to Dr. Strong's report, it will be seen, that the fetters in some instances weigh seven pounds, and in others, seven seers, or perhaps, somewhat more than double the former weight. There is no doubt, that this difference must greatly affect the comfort of the convict, and it is not impossible, that in some instances, if not generally, the greater or less weight of the fetters is made to depend, in a great measure, on the amount of the bribe paid to the jailor. Dr. Strong seems to think, that chain fetters are much more easily worn, than bar fetters ; this

might likewise be made the basis of a difference, in the extent of the punishment awarded ; or if that be deemed inexpedient, and the ignominy, combined with the security of the prisoners, be considered, the only legitimate objects in view, there would appear no just reason, why chain fetters should not be generally, if not invariably, employed.

Whichever mode of fashioning the irons be adopted, the ankle-rings ought to be well polished, and the part of the leg, against which they are apt to rub, should be protected by leather *mozas* or guards, so as to preserve it, as effectually as possible, against chafing ; two-thirds of the cases in hospital are generally the result of injuries of this nature, and when hospital gangrene breaks out, the ravages, which it commits, among these apparently trifling cases, is truly appalling.

The lacerations, which formerly resulted from corporal punishment, were apt to expose the sufferer to the same evil, and were the late wise and enlightened orders of Government, productive of no other benefit, there can be no doubt, that they will greatly reduce the number of the sick in jail hospitals, and prove the means of preventing an unnecessary, and unintentional waste of human life.

CHAPTER V.

Of the Dieting of Prisoners.

THE system of working the convicts of our jails has been already sufficiently dwelt on, and accordingly I recur to it at present, merely with the view of illustrating the subject of dieting this class of persons.

It will be sufficient to remind the reader, that they are taken out in the morning at sunrise, or a little before it, and that they then proceed to the place, at which it is intended, that they shall labour for the day. This it may be mentioned is often at a considerable distance from the jail, perhaps one, two, or even three miles. The prisoners continue at work, during the whole of the day, till about 4 o'clock in the afternoon; so that they occasionally do not reach the jail, till near sun-set. From the hour, they return to the jail, till dusk, is the only time, they have in the twenty-four hours to cook, and enjoy their single comfortable daily meal, if so it can be called. I must not however omit to mention, that they are likewise allowed an hour in the middle of the day to rest, and refresh themselves; that time however is unfortunately so short, as to render it impossible for them to prepare a meal; the utmost accordingly

they can do, and what they actually do, is to seat themselves under the shade of the first tree, that offers, and under this protection from the sun, make a scanty uncooked meal, on parched gram or rice, or even on these substances, in a totally raw state. The excessive heat and continued labour have made them of course sufficiently thirsty, and water, not generally of the purest kind, is drank in abundance. The consequences are not difficult to be foreseen, and Cholera, Dysentery, and Diarrhœa, form the most frequent and destructive of jail distempers in the East.

But were this objection obviated, and abundant time, we shall say a couple of hours, granted to the convicts in the middle of the day, to enable them to cook a meal, it is not impossible, nor even improbable, that the evil pointed out, would not be much remedied or ameliorated ; for to render the necessary time to enable them to cook of any avail, they must likewise be furnished with the means of procuring the materials of the meal.

There is too much reason to believe, that the allowance at present made to prisoners is too scanty to enable them to cook twice daily. As far as I have been able to learn, the allowance made by Government to convicts, for their subsistence, varies, from two to three pice per diem, that is, a little more or less than one penny. I am not

aware of the grounds, on which the above trifling variation is founded; but it is more than probable, that it is made to depend on the greater or less price of the necessaries of life, in the different districts throughout the country.

I am inclined to think, that under any circumstances, either of the sums above-mentioned is too small, and undoubtedly the lesser one is so. The lower classes of agricultural labourers in India, and indeed in any country, seldom earn more than is absolutely necessary to support existence, and in scarcely any district of India do they realize less than a couple of annas per diem, or about four rupees per mensem; but let us suppose, that they only earn three rupees per mensem, and let us even suppose, that one rupee of that goes to support their wives and children; still there would remain more, than one anna per diem, for their own subsistence—a sum which I feel satisfied will be found, on the whole, not too much.

The agricultural labourer, it ought to be recollected too, has often the means of making his scanty earnings go a great way, by supporting himself and his family, on the produce of his own field,—an advantage which the convict does not of course enjoy; in addition to this, the whole of the latter class are not of the very lowest of the community: many of them have been accustomed to

somewhat better fare, and feel in consequence keenly the miseries of their scanty pittance. His own subsistence too, there is great reason to believe, is not the sole object, on which the convict expends the Government allowance. He has his tobacco and the condiments for his food to purchase, and not unlikely, every one connected with him to bribe, from the Burkundauz or police officer, up to the Darogah or keeper of the jail ; or he may even divert a trifle of his scanty pittance to the support of his wife and children ; but this, I think it fairly may be presumed, is all but impossible.

That the present allowance is far too small, I have endeavoured to prove by the daily gains of the very lowest of the community. Reasoning from analogy, on grounds, which there is every reason to believe are well founded, would lead us to the same conclusion. The unfortunate lunatics, who are confined in the various native insane hospitals throughout the country, who are fed in the most ordinary, and in the cheapest manner, and who do not labour at all, cost the Government upwards of two rupees per mensem each, or rather more than one anna per diem, for food alone ; and if we refer to Mr. Kean's excellent report, we shall find, that debtors, who enjoy an allowance of one anna per diem, and Mussul-

mans, who use a comparatively generous and invigorating diet, are much less subject to sickness than Hindoos. The proportion of sick among the former class of prisoners, (that is debtors,) is only 1 in 43, and in the latter, 1 in 23 ; whereas among the Hindoos, it is 1 in 13, and among the labouring convicts, 1 in $11\frac{3}{4}$.

That the present system of dieting the prisoners, or rather that the present allowance granted them on that account, is miserable in the extreme, cannot be doubted, and yet it would appear, that some magistrates, with thoughtless zeal, have not hesitated, as a means of punishing them, to curtail the poor pittance, which I have endeavoured to show, is both insufficient to preserve health, and to ward off a fatal termination, when disease actually occurs.

But to return. If these unfortunate creatures escape the dangers of their miserable noon-day repast, they are brought home, often near sun-set. They have then, between that time and dusk, to cook their only meal. This it may be supposed is often not very fully dressed, those who have been labouring all day, are sufficiently hungry ; and their appetites are indulged accordingly. They are then locked up for the night, jaded, fatigued, and relaxed, with their stomachs distend-

ed with food, to sleep without protection on a cold damp floor of stone or masonry. The brief period allowed them to cook has been very generally remarked, and it has been proposed to obviate the difficulty, by allowing them cooks, and serving out their meals ready-dressed, on their return to jail, from the labours of the day.

The plan could be put in execution with no great difficulty, for a few of the convicts themselves of the better castes might be selected for cooks, and rations might be supplied in kind instead of in money. It is difficult however to see what great object the supporters of this plan propose to themselves ; for it is impossible that the convicts could labour longer, than they now do. Many of them too, are accustomed to the use of narcotics or condiments, which they mix with their food, and with which they could not dispense, with safety. On this account, the plan was found signally to fail, when it was attempted to be introduced into the jail at Gowhattee in Assam, and I am afraid, that it would give rise to a complicated system of account, and prove a deep and prolific source of fraud and corruption.

This however might be in a great measure prevented, by feeding the prisoners by contract, and it cannot be denied, that the plan would have many advantages. It would no doubt be dis-

agreeable to the convicts themselves, but as it is, neither our wish, our interest, nor our intention, that our jails should be places of pleasure or enticement, that seeming objection might rather form a reason of some weight for its adoption. There are others, moreover, of still greater importance. It might in a great measure prevent, or at least diminish, the system of bribery, from the highest to the lowest, which there is now great reason to believe prevails in our jails ; and it would at least diminish the facilities, which now exist for the prisoners' diverting the money allowed for their subsistence to other purposes, and some of these occasionally not of the most moral kind.

Be that as it may, there can be no doubt, that the prisoners should be fed in a manner, if not liberal, at least adequate to the due preservation of their healths. If money rations are to be continued, as at present, I would recommend, that they should generally be allowed one anna per diem ; in no instance less than three pice, and in none more than five pice daily, whatever might be the ordinary rate of provisions in the district. Of course, extraordinary occasions, such as the occurrence of famines, must be met by extraordinary remedies. The prisoners should be allowed to cook twice a day, in the morning and near sunset ; and finally, the quality of the provisions sold

to them, by the jail bunials, should be inspected daily by the medical officer, or in his absence, by some other responsible person appointed by the magistrate. This precaution will be still more necessary, if the prisoners are fed by contract. Finally, nothing in the shape of green vegetable substances ought to be permitted to be brought near the jail ; unless under some sort of assurance, that they will be used for culinary purposes.

NOTE.—Some prisoners are occasionally found in our jails not otherwise unwell ; but in so miserable and emaciated a condition as to give rise to a belief, that they have denied themselves the very necessities of life for the sake of hoarding their daily pecuniary allowance, or a portion of it. Such men, it may be supposed, are more liable to disease than others, and are more frequently carried off by it. Should this belief be well founded, and I am inclined to think there are grounds for entertaining it, it would form a strong argument in favor of the introduction of the system of feeding the prisoners by contract.

CHAPTER VI.

Of the Clothing of Prisoners.

WE now proceed to show how this unfortunate class of persons is clothed. In a country like India, where the temperature generally is so high, this might be considered almost a matter of indifference, and yet though perhaps inferior, in importance to some others, which we have discussed, it is of essential consequence to be attended to.

The Indian convict is allowed, what to him is tantamount to two suits of coarse cotton cloth, in the course of the year; but it is to be recollected, that the suit consists merely of a cloth about his loins, called a *dhotee*, and a loose scarf or *chuddur* thrown about his naked shoulders. He would appear likewise, in some jails to be allowed a piece of coarse grass mat, on which to sleep. I say, would appear to be allowed; for although I have been a great deal about jails, I cannot say, that I have observed the mat to be more than casually used. I conclude accordingly, that it is not found to add essentially to the comfort of the convict.

During the hot season, it were perhaps needlessly to complain, to say that the above clothing is not enough; but at other seasons, which may fairly be said to constitute two-

thirds of the year, it certainly is not. During the rains, the convicts are frequently drenched to the skin, once or oftener in the course of the day, and when they come to the jail to be locked up for the night, having generally no change of apparel, they are obliged to remain in their wet clothes, or to remain exposed almost in a state of nudity to the reduced temperature, which generally prevails at such times. During the cold season, or Indian winter, it is true, the convicts are allowed each one coarse blanket; and scanty as this provision is, and inadequate to the purpose contemplated, it is often not served out, until the season is too far advanced, to render it of any benefit or advantage.

Towards the termination of the rains, and the beginning of the cold weather, the jails are in the most sickly state; the days are still hot in the extreme, while the nights are raw and chilly. Fevers of the worst description prevail, and what is a great deal worse, the sequelæ of fevers, in the shape of intractable visceral disorders, and dysenteric affections of the most obstinate nature, both of which it will be readily admitted, require external warmth, as an essential part of their treatment. As the cold season more decidedly shows itself, pulmonary affections depending, on the sudden change of temperature, and the unpro-

tected state of the convicts, very clearly develop themselves, and usually carry off several victims in each jail.

With such imperative necessity existing, we might at least expect, that the solitary blanket allowed the convict by Government, would be served out with regularity, and at the period, when it is most wanted ; and yet I regret to say, that this is far from being the case. As a contrast to such thoughtless and improvident conduct, it gives me great pleasure to record the following circular on this subject, which the Medical Board caused to be addressed to Superintending Surgeons of divisions.

(No. 469.)

(CIRCULAR.)

To Superintending Surgeons of Divisions.

October 1st, 1833.

SIR,

The cold weather being now on the eve of commencing, I have been directed by the Medical Board to request, that you will immediately address the Medical Staff attached to Civil Stations, within your circle of superintendence, on the importance of seeing, that the whole of the prisoners, in jails under their care, are duly supplied with-

out delay, with the usual yearly blanket allowed by Government.

Thirty or forty spare ones ought at the same time, to be procured, for the exclusive use of such cases in hospital, as may require the protection to be derived from an additional covering of the sort.

The Board desire me to take this opportunity to suggest, that the blankets and clothing of such persons, as may die in hospital of any of the infectious diseases, and particularly of hospital gangrene, shall be invariably destroyed, without delay.

I have the honor, &c. &c.

(Signed) JAS. HUTCHINSON,
Secy. Med. Board.

The replies of medical officers attached to civil stations, now submitted, will show how much the Board's humane interference was called for, and how much human suffering, their instructions, if properly attended to, are calculated to alleviate, if not prevent. But let us not deceive ourselves, the single blanket at present allowed is not adequate to the purpose in view. The prisoner ought to be furnished with one, on his admission into jail, and with another at the commencement of the cold weather, to be served out not later than the 1st of October of each year.

The plan suggested would, perhaps, occasion a little additional expense to Government ;

but, even this, I am inclined to think, might be avoided. At present, the convict receives one blanket in the year, to do with it, as he pleases; now many of these persons remain but for a short time in confinement, when they are liberated, carrying with them the blanket, with which they have been supplied; would it not be better then, to furnish every convict on his being committed to jail, with a Government blanket, duly stamped or marked, which should be mustered weekly, which he should neither have the right, nor the power to dispose of, and which should be returned into store, on his liberation.

A full stock of these blankets ought always to be kept up, so as to enable the jailer not only to supply the convicts occasionally, during the rainy season, with a dry one, but to furnish them permanently with an additional blanket, during the whole of the winter, at the expiration of which, or on the liberation of the prisoner, it ought to be again returned into store.

It does not appear to me, that there is occasion to enter farther on this branch of the subject at present. I may however recur to it again hereafter.

CHAPTER VII.

Of Jail Hospitals, and some of the Principal Diseases, which infest them.

IT now remains for me to offer a few general observations on the subject of jail hospitals, and on the principal diseases, which infest them, or may be considered in any respect peculiar to them.

The hospital ought generally to be situated outside the jail, and every precaution adopted to secure not only ample accommodation for the number it is intended to contain; but a full and free circulation of air within its wards. With this object in view, the surrounding wall ought to be built somewhat lower, than that around the jail, or the hospital itself ought to be better raised, which will answer the same purpose. I question if in many instances it might not, with great advantage, be erected as a second, or upper floor, to a store room, or even over one of the common wards of the jail.

The observations, which have already been made in regard to jails, apply with still greater force to jail hospitals. They ought to be furnished with boarded cots, pannelled doors, and detached privies, for use at night. All jail hospitals ought likewise to be so built, as to be able to command

segregation of one or more of its inmates, should that measure be deemed necessary, either on account of extreme weakness, an infectious disorder, or the contingency of a capital operation. Jail hospitals ought invariably to be lighted at night, and one of the native doctors ought to be made to sleep in the hospital; or, at any rate, within the hospital compound or enclosure, so as to be at hand at all hours.

Every jail hospital ought likewise to be furnished with a warm bath, as being a most important auxiliary in the treatment of some of the diseases, to which prisoners are subject. I may add, before quitting this part of the subject, that at many bleak and exposed stations, not only in Hindoostan, but in Bengal, the prisoners have been allowed the use of fires, during the extreme severity of winter, with great apparent advantage.

The Surgeons in charge of jails, for many reasons, ought to be made to report as fully, and to keep up the same Hospital Records, as the Surgeons of Native corps; they ought likewise daily to inspect the provisions served out, or brought for sale, both to those in hospital, and to those in jail; and they ought to muster and inspect the whole of the prisoners every Sunday morning, ascertaining, at the same time, that they have not made away with any portion of

their clothing, more particularly the blanket allowed by Government. Prisoners are often averse to enter hospital, and there is no doubt, that by such inspections, many a case of disease might be detected, before it has become hopeless and irremediable.

No gang of prisoners ought ever to be detached without being adequately provided with medical assistance*; with the same object in view the key of the jail wards ought always to be kept at hand, so that a prisoner may be removed from the jail to the hospital, at a moment's warning, day or night, should he require it. By adequate attention to this point, there is no doubt, that many a case of cholera might be saved, that would otherwise be sacrificed to neglect and apathy.

It would be superfluous to repeat here what I have said elsewhere on the subject of fetters, and the ulcers resulting from them; I shall accordingly merely add, that when such cases present themselves for treatment, the fetters ought immediately to be struck off—a measure of humanity and precaution, which, as far as my experience goes, is now generally, if not universally practised.

* It will have been observed, that this contingency has been adequately provided for by Government, since the above passage was written.

This report has already extended to a length, which I confess, I did not at first contemplate, and it is now necessary to hurry to a conclusion, as rapidly as possible.

Every different disease, which affects the human body, it will readily be believed, is to be found at times among the inmates of jails; those however, which may be said to infest the jails of India, are fevers, dysentery, cholera asphyxia, and hospital gangrene. Regarding the treatment of the two first, I have little to add to what may be found, in my account of the alvine fluxes of the natives, published in the 5th vol. of the Transactions of the Medical and Physical Society of Calcutta. The line of practice therein laid down, I am inclined to think, on the whole, better adapted to the treatment of these affections, in the native constitution, than any other yet pointed out. I am far, however, from considering the production, to which I allude, by any means perfect, either in regard to its style of composition, or to the matter which it contains. The former, it were idle in me to inquire into, or to criticise; the latter however demands the most serious consideration, that I can bestow on it.

I am inclined to think, that had I insisted more on vascular depletion, particularly on local

bleeding by leeches, in the commencement of the dysenteries of the natives, where the patient is at all youthful or robust, and on the occasional use of the warm bath, that the essay in question would have been more useful, and worthy of attention. These remedies, however, to be useful, must be had recourse to, in the earliest stages.

The efficacy of blistering too, if had recourse to, before the disease is too far advanced ; and the relief which frequently, if not generally, follows the exhibition of a powerful opiate enema, particularly after the operation of a laxative, were perhaps not sufficiently dwelt on in the essay in question.

At the time of writing it, I was likewise not aware, that sulphur is often employed with advantage as a laxative in dysentery, and that it may be administered with an additional prospect of relief, if combined with small quantities of the *Extractum hyosciami* ; it is but fair however to say, that my experience of this remedy has been very limited.

In chronic or subacute cases, especially when they occur in persons advanced in years, I am inclined to think, that minute doses of Sulphate of copper, in combination with opium, are worthy of a trial, particularly where the dejections are

feculent and frothy ; but I would not recommend this remedy to be hazarded, where the evacuations are tinged with blood, or where considerable signs of intestinal irritation exist.

The observations of Mr. Assistant Surgeon Raleigh on the exhibition of sulphate of copper, in dysentery, to be found in the 7th volume of the Transactions of the Medical and Physical Society of Calcutta, contain much valuable information on this subject.

Finally, in my communication on the alvine fluxes of the natives, I have mentioned calomel as the only mercurial, which I was in the habit of using in such cases, at least such a conclusion might be drawn from no other having been alluded to : this impression however, would be erroneous, as I was in the habit occasionally of substituting the blue pill ; and although many prefer the latter preparation, I confess, that in my hands, it was not generally so beneficial as very minute doses of calomel, in combination with the other remedies.

On the subject of cholera asphyxia, as it prevails among the natives of India, I have likewise communicated my views to the public. Since the publication of my work on that subject, I have seen no reason materially to alter the sentiments therein expressed. Dr. Brown of Sunderland, in

his account of the disease, in the *Cyclopædia of Practical Medicine*, has given it as his opinion that "within the district which it occupies, it possesses a contagious property ; or in other words, those individuals, who have intercourse with the sick, especially in a locally impure atmosphere, are attacked in a greater proportion than the other members of the community : " and more lately Dr. Alison, on the same work, in his *History of Medicine*, declares, "that he has no difficulty in expressing his own conviction that the disease has a contagious property."

It is not my own opinion, that cholera in India is of a highly contagious nature, or that those exposed to its influence will be invariably, or even generally, affected by it ; but I conceive, that under circumstances favorable to its propagation, it is capable of becoming contagious even in India, and that too on some occasions, such as on board ship, to a frightful extent.

The views which I maintained in regard to the proximate cause of the disease, the discoveries of Dr. Stevens, and the general advance of medical science, have tended greatly to confirm, if not, to prove.

With regard to the plan of treatment which I proposed, I am desirous of offering a few observations.

The concurrent voice of medical men in India seems now to have pronounced blood-letting to be a doubtful remedy in the cholera of the natives of the country ; not that it is not eminently useful in some cases ; but on the other hand, that in others it appears to be hurtful, or at least not beneficial. In short, the precise states, in which it is likely to be had recourse to with advantage, are unknown ; it is generally supposed, however, that cases in which collapse has made any considerable progress, in which the disease has been of considerable standing comparatively, and in which the evacuations have already been profuse, are least suited for the adoption of the practice.

A general opinion likewise seems to exist, that cholera, like fever, varies in its type or character, at different times, or epidemic visitations ; and whether this be true or not, a belief in it, would seem to lead to the safest line of practice, in regard to the adoption of blood-letting, or the extent to which it ought to be carried, as a remedy in the disease.

Tartar emetic, since the period I wrote, has had a tolerably fair trial, as a remedy in cholera. It has been pretty extensively used in England, and apparently with some little advantage ; in India too, it has not passed altogether unnoticed. I am in possession of cases both in

which it has been used with success, and in which it has failed to be of any marked benefit. On the whole, from what has come under my observation, I am inclined to think, that though deserving of farther trial, the remedy is not likely to supersede the more generally established mode of treating the disease; perhaps, that it does not deserve to do so.

The general opinion seems to be, that it is unsuited for cases in which collapse has made much advance; but the fact is, that farther experience of the remedy is required, before it can be spoken of, either with certainty or precision.

Formerly I spoke somewhat disparagingly of blistering the epigastrium in this disease. At that time, the common blistering plaister was in use, and from its comparative inertness, general inadequacy as an epispastic in this disease, and from the misery which it occasioned to cholera patients, in a ceaseless state of jactitation, its application seemed generally to be productive of more harm than good. The case however is now altered: the liquor lyttæ is so speedy and efficacious in its action, and occasions so little pain or annoyance to the patient, that I have little hesitation in saying, that blistering the region of the stomach by means of it, if early had

recourse to, will be found a valuable addition to our curative means.

With respect to stimulants, after the first onset of the disease, I expressed a preference for those which do not possess a narcotic power. In this my sentiments have undergone no change; the stimulant preparations of ammonia are perhaps the best suited to our purpose, and we shall probably do well, neither too long to defer their use, nor too sparingly to exhibit them.

On the measures of a preventive nature, which ought to be adopted in cholera, as well as for the general line of practice, which ought to be pursued in the management of hospital gangrene, I beg to refer to the subjoined copy of correspondence, which passed between the Medical Board and Mr. Assistant Surgeon Cheek, then in medical charge of the civil station of Bancoorah.

(No. 943.)

To G. N. Cheek, Esq. Asst. Surg., Bancoorah.

Fort William, Medical Board Office, Jan. 7th, 1833.

SIR,

Copies of documents connected with the present sickly state of the prisoners in the jail at Bancoorah having been submitted to the Medical Board by Government, with a view to the

Board's adopting such measures as might appear to them best calculated to check the sickness, and alleviate the distresses of the unfortunate sufferers, I have been directed by the Board to offer the following observations for your consideration :

It appears, from the documents above alluded to, that the prisoners principally suffer from cholera morbus and hospital gangrene having broken out amongst them.

With regard to the first, it appears to the Board unnecessary to offer any observations relative to the particular line of treatment to be adopted, the disease having now existed so long in the countries subject to our sway in the East, and being of so frequent occurrence, that every medical officer of any standing must be familiar with almost every different mode of treatment, which has been proposed for its cure.

The Board however beg to observe, that the general precautionary or preventive measures, which they will take occasion to recommend, with the view to the eradication of the hospitable gangrene, they consider far from inapplicable, in regard to the cholera morbus.

There is nothing more essential to animal life, under every circumstance, than a due and adequate supply of atmospheric air, and whenever human beings are unduly crowded together,

disease, in some form, seldom fails to manifest itself. Under this impression, the Board conceive it of essential importance, that neither the jail nor the hospital should be over-crowded at any time; but at present, when an infectious disorder has actually broken out, particular attention to this object is imperatively demanded.

The jail, and more especially the hospital ought immediately to be vacated, and exchanged for tents pitched in a high, open, and dry situation, at a distance from the banks of rivers, jheels, morasses, and every other source of miasmatic exhalations. Adequate provision should, at the same time, be made, that the prisoners shall have a greater space allotted to them, particularly the sick, than under other circumstances would be deemed necessary, and that the cases of ulcers shall be separated from the rest, the instant that gangrenous action has been observed to commence.

The prisoners, at the same time, and more particularly the sick, ought to be supplied with food of the most unexceptionable quality, and they ought to be directed to cook a meal early in the morning, before quitting the encampment, for the labour of the day. They should likewise be supplied with comfortable clothing, and while in tents, with well-dried, clean straw, on which to sleep. Care should be taken, at the same time, that the

camp is well supplied with wholesome, pure water, of unexceptionable quality.

During the prevalence of extreme degrees of sickness, the prisoners ought to be lightly worked : they ought to be allowed leisure, as well as the pecuniary means, to enable them to cook a meal morning and evening ; and care ought to be taken, that they be prevented from eating rice or gram, parched or raw, during the intervening intervals. Men who have been accustomed to the habitual use of opium, or any other narcotic, ought not to be entirely deprived of it, particularly if their healths should appear to suffer from the want of it.

To the rude inhabitant of the mountainous and jungly districts, captivity in the plains has too frequently proved fatal, a termination which no course the Board are aware of, is so likely to avert, as establishing a small subsidiary jail for people of the sort, in a climate in some measure similar to that to which they have been accustomed.

The jail having been relinquished in favor of tents, the Board would recommend you to lose no time in having the whole of it, but particularly the hospital, carefully fumigated, either with the chlorine, the nitrous, or the muriatic acid gases, the drains cleaned, and together with the wards and the hospital of the jail thoroughly

purified by aspersions with solutions of the chlorides. The doors and windows ought then to be washed, and the walls in the interior of the buildings white-washed, the wells and tanks in and around the jail being at the same time cleaned out, and put into a thorough state of repair.

With respect to the treatment of hospital gangrene, it is more difficult to lay down specific directions, particularly in the absence of any information regarding the peculiar features of that, which prevails in the jail at Bancoorah. The difficulty is farther increased, by the circumstance of different remedies having been more or less successful in different hands; notwithstanding, the Board beg to offer a few observations on its treatment, for your consideration.

The treatment naturally divides itself into general and local. The circumstances of perhaps the greatest importance, with the view to the first have already been pointed out, viz. adequate space and accommodation for the sick.

The complaint is very generally attended with febrile irritation of a low or sub-acute character, and this no doubt requires to be attended to. In the robust, venesection has in some instances been practised with advantage, but would not appear to be much calculated for the class of patients now under consideration. Gentle action on the

digestive organs, by means of a mercurial, or acting mildly on the skin, and alimentary canal, at the same time, by means of tartar emetic, with a view to subduing febrile irritation, might perhaps be more advisable. Anodynes are at the same time indicated to soothe pain, and might be added to the above, or the desired effect might be sought for at once, by the administration of a preparation like Dover's powder, alone, or in combination with a mercurial.

It is not impossible, that quinine might be administered, at the same time, with one of these remedies, with a greater prospect of success, than if exhibited in its simple and uncombined form.

It now remains to mention a few of the local applications, which have been found most useful in the treatment of this complaint; these are the application of the undiluted nitric acid, the nitrate of silver, the liquor arsenicalis, the compound tincture of benzoin, the balsam of tolu, fermenting, carrot, and charcoal poultices, camphorated spirituous fomentations, warm terebinthinate dressings, solutions of the chlorides, of nitrate of silver, lotions of diluted nitric acid, and the black wash; these are probably useful, much in the order, in which they have been now enumerated.

As a last resource, amputation is worthy of a trial.

It must be superfluous on the present occasion, to direct your attention to the fetters of the prisoners ; the ankle-rings of these ought to be well polished, the limb at that part defended by a leathern *moza*, such as the prisoners frequently adopt of their own accord, and every precaution taken, that no unnecessary or uncalled for suffering is inflicted on these unfortunate people.

Before concluding, the Board desire me to recommend to your perusal two communications on this subject to be found in the 3rd volume of the Transactions of the Medical and Physical Society of Calcutta, by the late Dr. Adam, and the late Mr. Assistant Surgeon Leslie, as well as the valuable observations of the late Dr. Hennen, on the same subject, in his Principles of Military Surgery.

The Board have every confidence in your abilities, and they are satisfied, that under your care, the sick will meet with every attention, that humanity can dictate. To enable them to render you the most efficient assistance on the occasion, the Board request, that you will report to them direct, every third day, on the state of the sick, and the measures you have taken for their relief.

I have, &c.

(Signed) JAS. HUTCHINSON,
Secy. Med. Board.

*From G. N. CHEEK, Esq. Assistant Surgeon,
Bancoorah,
To the Secretary of the Medical Board,
&c. &c. &c. Calcutta.*

SIR,

I have now the honor to reply to your letter of the 7th Jan., No. 943 ; though by the documents handed, previous to receipt of your letter, you will have been able to form an opinion of what has been done to alleviate the state of the sufferers in the hospital of the Bancoorah jail, for the last three months.

You will allow me to draw your attention, in the first place, to the worst of all diseases, (cholera not excepted,) hospital gangrene ; premising, I have every reason to believe, the virulence of the disease has left us ; though melancholy is it, that so many have fallen victims to it.

To gangrene, unfortunately, I am no stranger, having witnessed its ravages on the continent, where, in men who had suffered amputation, and had so far recovered, as to have been sent to the convalescent depôt, whose stumps scarcely required any dressing, in one night have I seen the stump become one putrid mass ; such cases very rarely recovered. The disease I have lately had to cope with, has different features ; the cases,

generally speaking, consist of men of debilitated constitutions, who sink very rapidly.

They come into hospital with a small sloughing sore, no feverish symptoms ; the countenance indicates however great depression, and shows a violent disease is going on, still the sore is not of that nature to cause any alarm ; a change for the worse soon takes place, and likely, on the 2nd day, one is surprised to see the sore so much increased, to what it was the previous day, the edges turned up ; in fact, I cannot describe the appearance better, than in the words used by Dr. Hennen, in his work on Military Surgery, viz, the "cup-like appearance." He does indeed give too faithful a picture, and when comparing what he says with the disease going on, one is struck with his minute, and careful observation, and I would fain hope, I could not have taken a more experienced man for my guide.

He places however little dependence on nitric acid ; and in the diluted state, as used by him, I agree it is useless ; though the undiluted acid I have found a very valuable remedy, and I wish I had used it at first, instead of applying it in the diluted form. The undiluted, if used at the commencement of the disease, will I think, in general, be found of use ; after it has reached any height, and the diseased surface is extensive, I do not

think it does any good ; in fact I hardly know what is efficacious, or what can be depended on.

Opiates, at the time the nitric acid is used, combined with quinine, will I think be found of great use ; at least so I have found them.

Cases have I had, in which the leg or hand appeared like a half-dissected limb. Dr. Griffiths, when he passed this, saw some of such cases, and he was of opinion, the only application likely to be of use was the actual cautery ; but even this he expected no good from. All the cases he saw died, and I am glad, I did not use the actual cautery, as the pain is dreadful, and as in such cases it can do no good ; if the actual cautery would at any time be of use, it is before the wound gets very extensive, and then I prefer nitric acid, as it has all the good effect, (and is under control), without causing nearly the pain of the actual cautery ; in a word, I should not like to have recourse to treatment, so little practised in British Surgery, except in consultation.

Next to the nitric acid, have I found the solution of arsenic of use ; but this, like the nitric, if not used at first, is of little service. I wash the sore clean of all filth and matter with solution of subcarbonate of potash, either cold or tepid, as most agreeable to the feelings of the patient, previous to applying it.

It is not the wound alone, we have to do with, the constitution flags, and in all the cases, I have lost, the patient has sunk under a violent affection of the bowels, obliging me to discontinue tonics, and forcing me to place reliance alone, (if any can be placed,) on opiates. They may, and they do afford temporary relief, but no more ; they ease the sufferings of the patient, but leave no hope of removing the disease of the intestines ; when once the evacuations put on that slimy and bloody appearance, I have despaired, and my opinion has been too correct as to the result.

I have used the following local applications, common poultice, effervescing ditto, linseed ditto, charcoal and opium, bark and opium, rhubarb, the balsams, tincture of myrrh, spirits of wine, spirits of turpentine, diluted nitric acid, undiluted solution of arsenic ; also have, in those cases where the ulcer was not very large, applied cold water with oil cloth placed over it.

Poultices do harm ; they relax too much the debilitated vessels, and I wish, I had not used them so freely at first ; since I have discarded them, the wounds have done better.

The treatment I find of most service is the nitric acid, or solution of arsenic, and afterwards to apply a pledgit, covered with ung. res. flav. c. tereb., using, if the bowels will admit of it,

quinine and opium, with as generous a diet, with brandy and wine, as I can get the patients to use.

I would farther state, I have tried the use of mercury; in every case I found it did no good; on the contrary, so long as I continued it, the sore increased, and the patient daily got worse. In cases, in which I have tried the black wash, it has been useless.

Amputation would have been tried in many cases, had I hoped for any good effect. I have before tried it, and found it of no avail. In the cases lately under treatment, I should have been averse to use the knife; there being no separation of parts*, and besides, the disease appeared to have taken such hold of the patient, that in my opinion,

* I confess, I am somewhat sceptical, if Dr. Cheek has not here rated too low the advantages to be derived from amputation, in this destructive disease. In the commencement of the year 1827, when hospital gangrene prevailed to a distressing extent among the native troops, stationed at Prince of Wales' Island, amputation was had recourse to, in upwards of forty cases, and with a successful result, in rather more than one-half of them. The following observations on the subject, from the pen of Dr. Geddes, of the Madras Establishment, who was present at the time, appear to me highly valuable, and worthy of the most attentive consideration. "The question of amputation is one of primary and vital importance, and indeed, it would be a happy circumstance, if we could rely upon it, as a safe alternative, when other and milder measures fail us; but I fear, that in most

it required constitutional treatment, more than local. I very much wish, I had an opportunity of showing you some of the cases, (I hope recovering;)

cases, this *ultimum remedium* is delayed too long, and that under the humane but mistaken expectation of saving a limb, much more injury is done, than would *cæteris paribus* have followed the earlier adoption of such a sacrifice. The sore runs so rapidly through its respective stages, progressively deteriorating, and mortification so very hurriedly supervenes, that doubts and hesitation are liable to hazard life.

“Waiting for ‘the line of demarkation,’ is only sealing our patient’s death-warrant, and decision in a case, (as it indubitably is) of life or death must be prompt and final.

“If a sore have resisted for three or four days all the usual means of cure; if the subjacent tissues are becoming deeply affected; if hæmorrhages supervene; if the constitution be participating to a high degree with the local affection, our only hope of safety is in the knife; and in many instances, we will be gratified with the patients’ speedy recovery. To obviate the danger of the stump becoming contaminated with the prevailing affection, we must be careful, if possible, to remove our patient to a purer atmosphere, to inculcate the absolute necessity of cleanliness, and to use every precaution, that no communication take place between the convalescent, and the affected.

“Having spoken so freely respecting the propriety of early amputation in this disease, I with regret acknowledge, that had I at first acted on the principles here laid down, several of our patients would, in all human probability, have lived. But inexperienced in the disease, and deceived by the occasional gleam of improvement, which the sores exhibited, I was in-

they would tell you what I have had to cope with, better than any description, I could give in a letter.

Cholera has been very fatal, and such cases I scarcely ever witnessed. Many have been attacked in the town; but I have heard only of one case, that has escaped—the child of a *jemadar*, who applied for medicines from my hospital.

In about half the cases I have treated, my usual medicines have had a fair trial, viz. emetics, and large doses of calomel and opium; about half so treated, died; and some who recovered, were so much reduced by the calomel, (although their mouths were not affected), that I deemed it right to try smaller doses of the mineral, and I have since given calomel. gr. ii., extract. opii gr. iss. camphor, gr. ss., c. pip. nigr. one grain, every half hour, till the symptoms abate. About half so treated, have recovered. I am now trying, in the onset, emetics; afterwards calomel, opium, camphor, &c. The cases are so rapidly fatal, very little time indeed is allowed for any medicines to take effect.

Next to cholera and gangrene, dysentery, in its chronic form, has destroyed many of the convicts;

duced to delay; however, observation soon taught me a different mode of conduct and practice."

See Remarks on Malignant Ulcer and Hospital Gangrene, by J. L. Geddes, Esq. in the 6th volume of the Transactions of the Medical and Physical Society of Calcutta, p. 164.

and I confess, in this disease, it is hard to say what does good. Palliatives, such as pulvis Doveri, we have used; the relief is only temporary. I think I have found pil. hyd., ext. gent., pulv. ipecac., and ext. op. the most beneficial, *but as the cases, that come under treatment, besides the bloody evacuations, have general swelling over the whole body, more particularly the arms and legs, and a bloated countenance, tongue white and glazed, a short cough, and quick low pulse,* I must say, in such cases, I have but little hopes of being of service.

All the sick have been in tents, in the day time, sleeping at night in the hospital, which has been carefully cleaned; the other convicts are now in tents. Straw I have not given to the people; but they have a warm blanket each. I trust, as a stop has been put to the blankets, and clothes of the dead men being returned into store, and given out again to other prisoners, that we shall see our jail in future clear of this scourge. Nothing was so likely to keep up the infection, and I regret, I did not sooner find it out. On my writing to Mr. Russell, the custom was discontinued, and since then, all blankets and clothes have been destroyed with the bodies. I recommended that flour should be given to the convicts in preference to rice, (the prisoners like rice best,) it was given for some days; but has been discontinued, and the

correspondence regarding it handed through the commissioner to the superior courts.

With the rice, to the men in hospital, condiments are given, and I give a *paun* to each man after his meal; in fact, I hope all, that man can do, has been done for their benefit.

I do not think, the prisoners are over-worked; my opinion is, if they were constantly kept on the roads, even in the rains, (temporary huts could be erected,) the men would be far more healthy, and their services of use to the state. You will find, all acquainted with prisoners will corroborate what I say, that in every *sillah*, the men are more healthy, when out working, than when confined in jail.

You will be good enough to draw the attention of the Board to the fact, that by far the greater number of deaths have occurred among that class of prisoners, from the jungle and hill states; and certainly what you propose, regarding erecting a jail, in the part of the country, these people come from, would be worth a trial. It could be tried at a small cost; temporary huts would do very well. I am pretty sure, it would prevent my reports showing such dreadful mortality.

I hope this reply, in addition to what before I have had the honor to hand you, will be satisfactory; and I have only to thank the Board for pointing out works for my perusal, that might

have been overlooked ; they will see my stand-by has been one they drew my attention to, and which to my mind is an invaluable work.

I have, &c.

Jungle Mehals, } (Signed) G. N. CHEEK,
Jany. 16, 1833. } *Assistant Surgeon.*

In other letters received from Mr. Cheek, about the same time, with that now quoted, he reports, that all the ulcers in question were ordered to be washed, instead of sponge, with wet tow, which he caused immediately to be destroyed ; and that all bandages, dressings, and other articles of the sort, employed about such cases, were treated in a similar manner.

In addition to these measures, I would strongly recommend, that when hospital gangrene shows itself, the cases of that disease should be accommodated in tents, in which the freest circulation of air should be maintained ; and while a single patient ill of the disease remains in hospital, and indeed for some time after, that all other cases of ulcer should be treated in the jail wards, and dressed by persons totally unconnected with the establishment employed about the hospital.

It has been suspected by some, that there is some latent connection or similarity between the state of the atmosphere, which produces cholera and hospital gangrene, but I am not aware, that

there is any better foundation for the supposition than conjecture. It is somewhat in favor of it, that the number of deaths from cholera, hospital gangrene, fever, and dysentery, were exceedingly numerous indeed, at the time specified, in the Bancoorah jail, and occurred principally among the unfortunate inhabitants of Chota Nagpore and the surrounding districts, who were brought in as prisoners, in great numbers, during the Cole campaigns. Disease among them ran its course with a degree of virulence and rapidity almost unparalleled.

What was the cause or causes of this dreadful mortality, it is difficult to determine. It is not impossible, however, that the principal may have been nearly the same, as those, which destroyed the remains of the army of Sir John Moore, viz. the operation of the depressing passions, and the want of adequate space, and a sufficiently pure atmosphere to support the human body in a state of health*.

* For my own part, I am greatly inclined to suspect, that the appalling mortality, which took place at Bancoorah, from dysentery, hospital gangrene, and fever, was intimately connected with the prevalence of scurvy, in an acute form, occasioned by poverty of living, the influence of the depressing passions, and a too crowded state of the jail. The passage in the report of Mr. Assistant Surgeon Cheek, which I have

Post-mortem examination sufficiently showed, that these apparently uncontrollable cases of dysentery, hospital gangrene, and fever, particularly the two latter, were frequently connected with deep and extensive disorganization of the lungs, and indeed of the vital organs generally, which had not previously been suspected. I subjoin a few of the most remarkable dissections, that the reader may be able to judge for himself.

Dysentery Cases.

Surroop Ghose, admitted 11th Feb., died 28th March.—Dysentery.

Post-mortem examination.

Thorax—Lungs—Left adhering at the back part, lower lobe filled with frothy effusion. A small portion, near the lower part, had very much the

marked with Italics, goes far in support of such a supposition. It may be objected, that hospital gangrene is often communicated in a night to a person previously in the enjoyment of the highest health; but this is in reality no valid objection, but a corroboration of the opinion; for gangrene, which, occasionally, confessedly arises from particular kinds of food, may in like manner be communicated to what is denominated a healthy ulcer, and the constitution subsequently take on the diseased action. The great mortality, which, on one occasion, took place in the Milbank Penitentiary, is supposed to have been intimately connected with the scorbutic diathesis; although the disease manifested itself principally in the forms of diarrhœa and dysentery.

appearance of an old pulmonary apoplexy. Right lung just in the same state,—heart healthy.

Abdomen—Liver natural; spleen healthy, stomach contracted, and showing much the appearance of a thickened small intestine: it contained nothing but a little glairy mucus: rugæ on its internal surface appeared more numerous from its contraction; a large lumbricus in the duodenum; colon filled with fæces, several large and deep ulcerations on its internal surface, and many abrasions not so deep; mesenteric glands very much enlarged; rectum, coats much thickened, ulcerations through its whole extent, several of them $\frac{3}{4}$ of an inch in diameter; small intestines natural; kidneys healthy; the bladder contained a large quantity of water.

Head—An immense effusion under the pia mater; substance of the brain very white, and soft; right ventricle contained a little effused serum, and the spinal canal a large quantity of water.

Singh Sirdar, admitted 17th February, died 10th March. No disease mentioned—probably dysentery.

Thorax—Extensive adhesions on both sides; left lung contained two deep-seated abscesses, one large enough to hold half an ounce of matter:

lung broken down, and impervious to air ; right lung exactly in the same state, four or five abscesses ; upper lobes of both pretty healthy.

Trachea also contained matter ; internal membrane was thickened, and about the larynx showed marks of previous inflammation ; heart natural.

Abdomen—Liver healthy ; spleen natural, omentum black ; peritoneum looks, as if far advanced towards putrefaction ; colon and rectum ulcerated from one end to the other ; ulcerated spots black, but penetrating only through the inner coat.

Brain—Effusion on the surface, and in the ventricles.

Dial Magee, admitted 13th February, died 11th March.—Dysentery.

Post-mortem examination.

Body—Much emaciated.

Thorax—In the left side was discovered upwards of 4 lbs. of fluid, of a brownish tinge ; in the right side, about half the above-stated quantity ; left lung infiltrated through its whole extent, more particularly the lower lobe ; the same purulent matter followed the scalpel, through the whole viscus ; right lung showed exactly the same appearance as the left ; heart healthy, though rather of a pale appearance.

Abdomen—Liver of a gray color, a little enlarged ; gall-bladder full, containing thick black bile like tar ; omentum natural ; mesenteric glands a good deal enlarged ; spleen and kidneys healthy ; intestines contained a dark tenacious matter ; colon very extensively ulcerated, not extending beyond the inner coat ; rectum very much ulcerated, extending into the muscular coat ; cœcum—inner lining, much inflamed, and studded with dark spots : no ulceration.

Head—Brain vessels of, nearly empty ; surface of brain peculiarly white : no effusion ; ventricles natural ; about three ounces of serum were discovered between the cerebrum and cerebellum.

Shaik Rufeek, admitted 22nd December, 1832, with chronic dysentery, died 25th January, 1833.

Thorax—Lungs nearly destroyed.

Abdomen—Liver schirrous ; remainder of the gland very black ; coats of the stomach very much thickened ; spleen healthy ; omentum a good deal diseased : no ulceration of the intestines.

Doocun Moirah, admitted 11th November, with slight fever, swelling of the face, and oozing of blood from the gums. 18th January, was attacked with dysentery. Died 25th January.

Thorax—A large quantity of fluid in the cavity ;

lungs destroyed by abscesses, and on cutting across, a large quantity of matter was perceived.

Abdomen—Liver considerably enlarged ; spleen three times its natural size ; on omentum, black lines were distinguished, and the intestines were marked with dark spots : no ulceration had taken place.

Jeet Rai, admitted 14th November, with swelling of the whole body, and dysentery. On the 15th January, gangrenous sore of the upper lip took place. Died on the 22nd January.

Dissection—Lungs much ulcerated ; liver in a like state, and on pressing it, a large quantity of pus escaped ; the intestines marked with black spots ; omentum marked with black lines ; contents of intestines black, dirty, tenacious stuff adhering to coats of intestines.

Joynauth Boomish, admitted with dysentery 6th January, died 24th January.

Dissection.—*Lungs*, both sides much diseased ; *liver enlarged*, and a large abscess in the centre : appearance of the liver very black ; spleen about five times the natural size.

On opening the abdomen, a large quantity of water escaped ; intestines contained matter like water, in which putrid flesh had been soaked.

Gangrene Cases.

Triboobun Koormi, admitted 25th November, died 8th February.—Gangrene.

Thorax—Both lungs much diseased.

Abdomen—Liver enlarged, and very white : in the centre of liver one black spot, on cutting into it, found deep seated matter ; stomach much enlarged, on opening it, a large quantity of green fluid of the smell of the sore was found ; omentum much discoloured ; intestines spotted ; spleen healthy. Gangrene extended from near the foot to the hip ; the whole of the tibia nearly laid bare.

Shaikh Doolul, admitted 12th January, with gangrene of the leg, died 30th January, 1833.

Thorax—Lungs healthy.

Abdomen—Liver much enlarged, very white, and schirrous ; stomach of an enormous size, with dark spots, on cutting into it, a large quantity of matter escaped ; intestines, dark spots, and ulcerated : contents of intestines, black matter, of the same smell as the gangrenous sore.

Mohun Boomish, admitted 22nd February, with slight diarrhœa ; after which, was attacked with swelling of the face. On the 10th, gangrene shewed itself, at the outer part of the lip. Died March 11th, 1833.

Post-mortem examination—Body considerably emaciated, and anasarcaous. On cutting into the cellular texture, serous effusion was observed to a considerable extent.

Thorax—Considerable adhesions on both sides : on separating which, in the cavity, on the left side, were found 4 lbs. of fluid : right side, no effusion ; upper lobe of the left lung healthy ; lower lobe hepatized, and semi-purulent matter oozed out, in all directions, on cutting into it ; right lung healthy ; aorta coats of, considerably thickened.

Abdomen—Liver considerably enlarged, otherwise healthy ; gall-bladder very full of well-formed bile ; intestines, large and small, healthy ; large spotted externally, internal coat shewed no marks of inflammation.

Head—Brain bloodless, and particularly white : considerable effusion between the brain and membranes ; four ounces of effused fluid between the cerebrum and cerebellum ; ventricles healthy.

In making a section of the gangrenous part ; from the angle of the jaw to the centre of the chin and right eye was included, in one mass of disease.

Gyram Bhat, admitted 15th October, died 6th February.—Gangrene.

Thorax—Abscess of lungs ; heart healthy.

Abdomen—Liver spotted : on cutting into the

spots, matter was discovered; upper surface of the gland schirrous; spleen healthy; stomach and intestines spotted: on cutting into the intestines, matter similar to the discharge from the gangrenous sore was found. The gangrene extended from the lower part of the leg to the hip, exfoliation of the tibia had taken place. Portion of exfoliation herewith sent.

Fever Cases.

Boobund Boomish, admitted 18th January, with fever, died 22nd January.

Dissection. Both lungs a mass of disease; liver considerably enlarged; intestines healthy, containing dark tenacious matter; *pericardium* contained 16 ounces of water.

Dalim Boomish, admitted 18th January, with fever, died 22nd January.

Lungs much diseased; *liver* enlarged; omentum very dark; spleen healthy; intestines contained a large quantity of black feculent matter.

Toolseeram Mahah, admitted 21st January, with fever, died 24th January.

Dissection. Right lung much diseased: *pericardium* contained a large quantity of water; liver much enlarged, and a large abscess in the lower portion; omentum much discoloured; *spleen*

healthy ; contents of the intestines of the appearance of mud.

Mohun Bagdee, admitted with fever, 21st January, died 24th January.

Both lungs much diseased ; pericardium contained 12 ounces of water ; liver enlarged, and very black ; *spleen* healthy ; contents of the intestines like water, in which putrid flesh had been soaked.

Kalleechn Thewas, admitted 19th March, with catarrhal fever, died 28th March.

Sectio Cadaveris.

Lungs—Adhesions on both sides, most extensive on the right ; left lung red, and presenting much the appearance of rotten flesh, so soft that it easily broke under the finger ; right lung adhering very firmly to the diaphragm : an unusual quantity of blood in the venous vessels of both : proper substance of the right lung much the same as the left ; heart healthy, containing a quantity of fibrine.

Abdomen—Shewed considerable congestion of the large veins ; liver of an enormous size, and soft : lower edge of the large lobe white, and indurated ; gall-bladder very much contracted, and impacted with stones ; a large one blocked up

the duct ; considerable congestion of the mesentery, and enlargement of its glands ; colon contained matter like sheep's dung, broken down ; rectum the same ; stones in the gall-bladder, in number, six large, and about a dozen small ; kidneys enlarged, but not much diseased in structure.

Head—Not opened ; urinary bladder, internal coat ulcerated all over, and cicatrices of old sores observable in several parts.

Tuscha Boomish, admitted into hospital 21st December, 1832, with dropsy, died 28th January, 1833.

Thorax—A large collection of water in cavity ; in pericardium 16 ounces of water ; on both right and left lung, black spots, the size of a rupee : on cutting into which was found thick dark matter.

Abdomen—Liver peculiarly white, and schirrous ; spleen very much enlarged, and in the cavity of abdomen a large collection of fluid.

Muttoor Raick, admitted 14th January, 1833, with fever, died 28th January, 1833.

Thorax—Left lung, the whole filled with a large quantity of matter.

Abdomen—Liver considerably enlarged, of dark colour, and considerably hardened in the centre ; intestines and spleen natural.

Gobindhu Boomish, admitted 18th January, 1833, died 28th January, 1833.—Fever.

Thorax—Both lungs much diseased, and filled with matter.

Abdomen—Liver much enlarged, of a white appearance ; intestines and spleen healthy.

It is a question to be asked, which I am inclined to think, humanity will answer in the affirmative ; if, when disease of a deadly character prevails to a great extent, persons in an apparently hopeless or dangerous state, whose crimes are not of the deepest dye, ought not to be liberated from farther confinement, and allowed to enjoy perhaps the only chance of recovery, which they have at such times, viz. from change of air, and the society and attentions of their friends.

In sanctioning any measure of the sort, however, great care should be taken, that it is not too frequently had recourse to ; for no one can deny, that it is open to abuse, either by the patients or the medical officer in attendance : by the former, by their working on the feelings of the surgeon, through a natural desire of regaining their liberty,

and by the latter, from a wish laudable in itself, if properly kept in control, of presenting as favourable a report, as possible, to the superior medical authorities.

I have now concluded the task, I have assigned myself; in a very unworthy manner, I am well aware; it affords me some consolation, however, to think, that my deficiencies will in some measure be counterbalanced by the talent displayed in the contributions of my professional brethren, and that their well-founded merits and pretensions will not suffer, on my account. Inferior, however, as the execution of my portion of the task may be, I will allow none of them to excel me, in an ardent desire to ameliorate such of the miseries and distresses of an extensive and unfortunate class of our fellow creatures, as appear to me, neither contemplated by law, nor justifiable by humanity.

FINIS.

TABLE I.

TABLE exhibiting the number of Casualties by Death, distinguishing those from Cholera, in the Jails throughout the Presidencies of Fort William and Agra, during the year 1833; intended to illustrate the greater or less salubrity of the several stations or localities mentioned.

Name of the Station.	Average strength, during the four quarters of the year.	Average admissions, during the four quarters of the year.	Proportion of sick to strength.	Deaths by ordinary diseases, during the four quarters.	Deaths by Cholera Morbus, during the four quarters.	Ratio per cent. of deaths from ordinary diseases.	Ratio per cent. of deaths from Cholera Morbus.	General ratio per cent.
Allipore, ~~~~	2111	419	1 to 5	197	34	9.36	1.61	10.97
Cuttack, ~~~~	597	216	1 to 2 $\frac{1}{2}$	51	20	8.50	3.33	11.83
Rungpore, 6m.	761	348	1 to 2	85	„	11.30	„	11.30
Barraset, ~~~~	248	15	1 to 16	1	„	0.40	„	0.40
Tipperah, ~~~~	373	136	1 to 2 $\frac{3}{4}$	10	4	2.70	1.07	2.77
Hooghly, ~~~~	452	125	1 to 4	46	8	10.22	1.76	11.98
Pooree, ~~~~	343	132	1 to 2 $\frac{3}{4}$	10	11	2.95	3.17	6.12
Dinagapore, ~	349	219	1 to 1 $\frac{1}{2}$	123	79	35.16	22.55	57.71
Jessore, ~~~~	688	272	1 to 2 $\frac{1}{2}$	24	15	3.50	2.25	5.75
Chittagong, ~~~	488	132	1 to 3 $\frac{1}{2}$	12	12	2.28	2.28	4.56
Midnapore, ~~~	726	369	1 to 2	125	31	17.23	4.27	21.50
Gowhattee, ~~~	474	104	1 to 4	61	„	13.0	„	13.0
Mymunsingh, ~	518	162	1 to 3 $\frac{1}{2}$	56	15	11.10	2.96	14.06
Backergunge, ~	661	249	1 to 3	40	31	6.0	4.75	10.75
Akyab, ~~~~	140	86	1 to 2	3	„	2.15	„	2.15
Balasore, ~~~~	616	132	1 to 4 $\frac{1}{2}$	35	4	5.75	0.65	6.40
Goalparah, ~~~	342	79	1 to 5	10	„	2.95	„	2.95
Burdwan, ~~~~	418	257	1 to 2	18	11	4.40	2.60	7.0
Noacolly, ~~~~	450	202	1 to 2	8	3	1.75	0.65	2.40
Moorshedabad	882	245	1 to 4	51	18	5.85	2.06	7.91
Dacca, ~~~~~	640	243	1 to 2 $\frac{1}{2}$	12	18	1.85	2.20	4.65
Rajshaye, ~~~~	618	359	1 to 2	39	34	6.32	5.65	11.97
Bancoorah, ~~~	529	287	1 to 2	121	9	23.0	1.70	24.70
Bhaugulpore, ~	344	123	1 to 3	20	13	5.70	3.70	9.40
Sherghottee, ~	503	379	1 to 1 $\frac{1}{2}$	40	91	8.0	18.20	26.20
Furreedpore, ~	484	202	1 to 2	12	1	2.50	0.20	2.70
Maldah, ~~~~~	212	80	1 to 3	11	3	5.16	1.40	6.56
Patna, ~~~~~	299	121	1 to 2 $\frac{1}{2}$	7	2	2.33	0.66	2.99
Arrah, ~~~~~	526	72	1 to 7	12	3	2.25	0.57	2.82
Monghyr, ~~~~	433	113	1 to 4	17	9	4.0	2.08	6.08
Sylhet, ~~~~~	424	122	1 to 4	25	12	5.90	2.80	8.70
Kishnagur, ~~~	439	136	1 to 3 $\frac{1}{4}$	21	6	4.95	1.40	6.35

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Name of the Station.	Average strength, during the four quarters of the year.	Average admissions, during the four quarters of the year.	Proportion of sick to strength.	Deaths by ordinary diseases, during the four quarters.	Deaths by Cholera Morbus, during the four quarters.	Ratio per cent. of deaths, from ordinary diseases.	Ratio per cent. of deaths, from Cholera Morbus.	General ratio per cent.
Purneah, ~~~~	389	105	1 to 3½	32	23	8.26	6.0	14.26
Sarun, ~~~~~	419	138	1 to 3	13	1	3.08	0.23	3.31
Ghazeepore, ~	1022	305	1 to 3⅓	42	1	4.09	0.09	4.18
Chirra Punjee, ~	200	88	1 to 2½	15	„	7.50	„	7.50
Beerbhoom, ~	386	104	1 to 3½	33	2	8.30	0.50	8.80
Gyah, ~~~~~	575	236	1 to 2½	22	2	3.95	0.35	4.30
Tirhoot, ~~~~	591	120	1 to 5	17	4	2.45	0.66	3.11
Benares, ~~~~	713	327	1 to 2	8	2	1.12	0.28	1.40
Mirzapore, ~~~	298	96	1 to 3	2	„	0.65	„	0.65
Allahabad, ~~~	952	157	1 to 6	25	5	2.63	0.52	3.15
Cawnpore, ~~~~	779	259	1 to 3	23	„	3.0	„	3.0
Meerut, ~~~~~	417	64	1 to 6	9	„	2.15	„	2.15
Saharanpore, ~	396	105	1 to 3	31	„	7.70	„	7.70
Goruckpore, ~	1245	300	1 to 4	75	3	6.0	0.24	6.24
Bandah, ~~~~~	526	92	1 to 5½	25	13	4.75	2.48	7.23
Futtyghur, ~~~	1287	182	1 to 7	28	1	2.19	0.08	2.27
Delhi, ~~~~~~	292	232	1 to 1⅓	9	„	3.0	„	3.0
Moradabad, ~~~	789	148	1 to 5	28	„	3.70	„	3.70
Juanpore, ~~~~	457	109	1 to 4	14	7	3.10	1.60	4.70
Futtehpore, ~	959	199	1 to 5	16	7	1.68	0.72	2.40
Mynpooree, ~~~	1034	172	1 to 6	17	„	1.65	„	1.65
Goorgong, ~~~~	219	115	1 to 2	2	„	0.90	„	0.90
Howalbaugh, ~	84	25	1 to 3¼	13	„	16.0	„	16.0
Azimghur, ~~~	456	139	1 to 3½	17	2	3.33	0.44	3.77
Humeerpore, ~	405	224	1 to 2	6	4	1.50	1.0	2.50
Etawah, ~~~~~	200	27	1 to 6	11	„	5.50	„	5.50
Moozuffur-nuggur, ~~~~	152	43	1 to 4	2	„	1.30	„	1.30
Bareilly, ~~~~~	560	88	1 to 7	14	„	2.50	„	2.50
Shajehanpore, ~	384	87	1 to 4½	34	10	8.75	2.60	11.35
Allighur, ~~~~~	2237	489	1 to 5	70	3	3.13	0.14	3.27
Subathoo, ~~~~	32	28	1 to 1	1	„	3.0	„	3.0
Nursingpore, ~	174	69	1 to 3	5	3	2.86	1.75	4.61
Baitool, ~~~~~	73	42	1 to 2	1	1	1.25	1.25	2.50
Moradabad, (Bijnore,) ~~~	181	49	1 to 4	11	„	6.0	„	6.0
Bolundshuhur	313	42	1 to 7	7	„	2.24	„	2.24
Amballah, ~~~~	27	10	1 to 2¾	„	„	„	„	„
Seonee, ~~~~~~	153	25	1 to 6	1	5	0.66	3.32	3.98

TABLE I.

Name of the Station.	Average strength, during the four quarters of the year.		Average admissions, during the four quarters of the year.		Proportion of sick to strength.		Deaths by ordinary diseases, during the four quarters.	Deaths by Cholera Morbus, during the four quarters.	Ratio per cent. of deaths from ordinary diseases.	Ratio per cent. of deaths from Cholera Morbus.	General ratio per cent.
Neemuch, ~~~	166	58	1 to 3	3	3	1 to 3	3	1 to 3	1.90	1.90	1.90
Deyrah Doon, ~~~	131	23	1 to 6	3	3	1 to 6	3	1 to 6	2.30	2.30	2.30
Panniput, ~~~	245	62	1 to 4	5	5	1 to 4	5	1 to 4	2.0	2.0	2.0
Rhotuc, ~~~~~	199	82	1 to 2 $\frac{1}{4}$	12	12	1 to 2 $\frac{1}{4}$	12	1 to 2 $\frac{1}{4}$	6.0	6.0	6.0
Jubbulpore, ~	387	47	1 to 7	11	11	1 to 7	11	1 to 7	2.90	0.27	3.17
Beawur, ~~~~	62	30	1 to 2	3	3	1 to 2	3	1 to 2	3	3	3
Agra, ~~~~~~	583	68	1 to 8	13	13	1 to 8	13	1 to 8	2.25	2.25	2.25
Hissar, ~~~~~	527	145	1 to 4	21	21	1 to 4	21	1 to 4	4.0	4.0	4.0
Saugor, ~~~~~	743	208	1 to 3	62	62	1 to 3	62	1 to 3	8.27	8.27	8.27
Hussingabad, ~	143	37	1 to 4	2	2	1 to 4	2	1 to 4	1.35	1.35	2.70
Ajmeer, ~~~~~	166	58	1 to 3	3	3	1 to 3	3	1 to 3	1.90	1.90	1.90
Mundlaiser, ~	70	87	1 to 1	3	3	1 to 1	3	1 to 1	3	3	3

NOTE. The high rates of mortality, which appear to have prevailed in the Bancoorah and Sherghottee Jails, are probably to be attributed to the number of prisoners, who were sent in to these Jails, from the hilly tracts of Chotah Nagpore, and the surrounding country, during the Cole Campaigns.

Among these unfortunate people, the proclivity to disease was great, and its course rapid and destructive.

The stations of Bancoorah and Sherghottee are not considered unusually unhealthy for Europeans.

TABLE II.

Abstract of the General Quarterly Returns of the Sick in Jail Hospitals, in the Lower Provinces, during the four quarters of the year 1833; intended to exhibit the greater or less prevalence of particular diseases, at the several seasons of the year, in that part of India.

	1st Quarter. January, February, and March.							2nd Quarter. April, May, and June.							3rd Quarter. July, August, and September.							4th Quarter. October, November, and December.							General Abstract. Total Strength, 19,438.												
	Remaining.	Admitted.	Total.	Discharged.	Transferred.	Liberated.	Died.	Remaining.	Admitted.	Total.	Discharged.	Transferred.	Liberated.	Died.	Remaining.	Admitted.	Total.	Discharged.	Transferred.	Liberated.	Died.	Remaining.	Admitted.	Total.	Discharged.	Transferred.	Liberated.	Died.	Remaining.	Admitted.	Total.	Discharged.	Transferred.	Liberated.	Died.	Remaining.					
Apoplexy,	1	4	5	2	"	"	1	2	2	2	4	1	"	1	2	1	"	1	1	"	"	"	12	38	50	36	"	1	6	7	4	160	206	148	"	2	19	36			
Asthma,	11	39	50	30	"	"	9	11	12	28	40	32	"	1	2	11	55	66	50	"	"	"	12	38	50	36	"	1	6	7	4	160	206	148	"	2	19	36			
Cholera,	1	190	205	63	"	"	105	37	37	523	560	245	"	9	276	29	30	173	203	117	"	14	69	3	226	229	122	"	10	65	32	85	1112	1197	547	1	33	515	101		
Diarrhoea,	74	464	538	405	"	3	61	69	63	609	672	563	"	3	45	61	58	605	663	528	"	5	54	76	82	516	598	441	"	3	76	77	277	2194	2471	1937	1	14	236	283	
Dropsy,	17	89	106	65	"	2	17	22	20	65	85	52	"	1	11	21	30	98	128	66	"	2	29	31	22	75	97	47	"	25	89	327	416	230	"	5	82	99			
Dysentery,	75	543	618	423	1	3	104	87	89	647	736	521	1	32	75	107	84	616	700	460	3	42	76	119	679	844	576	"	18	125	125	413	2485	2898	1980	"	5	95	380	438	
Dysury,	"	14	14	12	"	"	"	2	2	137	39	33	"	"	1	5	4	25	29	24	"	"	5	5	11	16	12	"	"	"	4	11	87	98	81	"	1	16	"		
Dislocations and Sprains,	"	13	13	11	"	"	"	2	5	17	22	16	"	"	1	6	6	18	24	21	"	"	1	1	12	13	13	"	"	"	6	10	45	55	38	"	1	3	13		
Fractures,	2	9	11	9	"	1	1	1	1	13	14	10	"	"	1	3	3	10	13	8	"	"	2	3	4	13	17	11	"	"	"	8	379	3321	3700	3055	"	2	160	158	325
Fevers, { Continued,	121	806	927	775	"	3	54	95	88	829	917	771	"	37	20	69	78	796	874	683	2	64	29	96	92	890	982	826	"	36	55	65	379	3321	3700	3055	"	2	160	158	325
{ Remittent,	3	16	19	16	"	"	"	3	3	23	26	15	"	2	1	8	67	459	526	425	"	22	79	11	54	65	57	"	"	"	8	84	552	636	513	"	2	23	98		
{ Intermittent,	166	1014	1180	1003	"	1	19	157	162	1108	1270	1053	"	8	46	163	64	778	842	708	"	7	23	104	243	1635	1878	1647	"	9	58	164	635	4535	5170	4411	"	25	146	588	
Hepatic Affections, { Hepatitis, Acute,	3	36	39	36	"	"	1	2	4	36	40	30	"	"	3	7	7	55	62	61	"	"	1	1	56	57	56	"	"	"	1	15	183	198	183	"	"	5	10		
{ " Chronic,	3	10	13	10	"	"	"	3	"	16	16	13	"	"	1	3	3	14	17	17	"	"	"	"	22	22	21	"	"	"	"	9	46	55	49	"	"	1	5		
{ Icterus,	2	10	12	10	"	"	"	2	"	4	17	21	17	"	"	1	3	3	8	11	11	"	"	"	11	11	11	"	"	"	"	1	6	62	68	61	"	"	7	"	
Inflammations, .. { External,	3	40	43	36	"	1	"	6	6	25	31	24	"	"	2	4	4	31	35	29	"	"	6	6	14	20	19	"	"	"	"	19	110	125	108	"	1	2	16		
{ Thoracic,	11	32	43	31	"	"	4	8	7	33	40	34	"	1	2	4	31	35	29	"	"	"	6	6	14	20	19	"	"	"	"	10	15	56	240	296	199	"	"	41	56
{ Enteritic,	3	13	16	11	"	"	1	4	1	29	30	9	"	1	3	3	8	130	138	84	"	"	24	30	45	75	50	"	"	"	"	1	21	74	95	67	"	1	22		
Mania,	26	26	52	17	"	1	3	24	25	37	62	33	5	"	16	16	17	33	32	"	"	1	1	15	16	15	"	"	"	10	15	56	240	296	199	"	"	41	56		
Ophthalmic Affections, { Acute,	4	30	34	28	"	"	"	6	8	20	28	22	"	"	6	4	25	29	26	"	"	1	2	2	18	20	18	"	"	"	"	2	18	93	111	94	"	"	1	16	
{ Chronic,	3	28	31	22	"	1	"	8	9	12	21	18	"	"	3	3	18	21	17	"	"	4	5	27	32	22	"	"	"	"	10	20	85	105	79	"	"	25	"		
Phthisis Pulmonalis,	7	35	42	24	"	1	6	11	9	34	43	26	"	"	6	11	11	35	46	34	1	"	6	5	23	28	11	"	"	"	4	32	127	159	95	"	1	30	31		
Rheumatism,	54	299	353	287	"	2	"	64	64	293	357	291	"	14	1	51	29	156	185	128	2	12	43	54	278	332	254	"	14	"	64	201	1026	1227	960	2	42	1	222		
Spleen,	12	40	52	34	"	2	"	14	16	42	58	43	"	"	15	9	37	46	37	"	"	1	1	7	10	56	66	47	"	"	"	6	13	47	175	222	161	"	3	9	49
Syphilis,	24	66	90	62	"	2	1	25	28	88	116	85	"	"	23	19	105	124	96	"	"	7	10	56	66	47	"	"	"	6	13	47	175	222	161	"	3	9	49		
Small-pox,	4	72	76	49	"	"	13	14	14	48	62	35	"	"	8	10	14	54	68	57	"	"	11	"	2	2	2	"	"	"	18	89	341	430	320	"	1	22	1	86	
Ulcers,	226	851	1077	832	"	12	23	210	220	1014	1234	960	"	26	8	239	257	1565	1822	1309	2	66	21	424	434	1005	1439	1157	"	"	"	32	176	208	143	"	9	21	35		
Wounds,	29	146	175	146	"	2	4	21	27	183	210	172	3	"	1	34	36	229	265	219	"	"	3	5	38	156	194	161	"	26	30	226	1137	4435	5572	4258	"	2	130	83	1099
Other diseases,	219	1284	1503	1218	1	2	25	257	213	1360	1573	1359	"	16	8	190	203	1627	1820	1547	"	"	12	28	243	248	1618	1866	1621	1	4	39	201	883	5889	6772	5764	2	34	81	891
Total,	1118	6219	7337	5686	11	39	434	1167	1139	7188	8327	6483	14	188	519	1123	1083	7781	8864	6825	20	238	396	1385	1516	7616	9132	7359	11	129	515	1118	4856	28804	33660	26353	56	594	1864	4793	

NOTE.—It will be observed, on close examination, that this, and some of the following tables, are not strictly comparable, on account of the different periods of observation, and the different parts of India, in which the data were collected.

NOTE.—It will be observed, on close examination, that this, and some of the following tables are not strictly accurate: this unfortunately could not be prevented; it is hoped, however, that it will not be found materially to impair the interest, which they possess, or to diminish their general utility as objects of reference.

TABLE III.

Abstract of the General Quarterly Returns of the Sick in Jail Hospitals, in the Upper Provinces, during the year 1833; intended to exhibit the greater or less prevalence of particular diseases, at the several seasons of the year, in that part of India.

Diseases.	1st Quarter. January, February, and March.							2nd Quarter. April, May, and June.							3rd Quarter. July, August, and September.							4th Quarter. October, November, and December.							General Abstract. Total Strength, 20,238.												
	Remaining.	Admitted.	Total.	Discharged.	Transferred.	Liberated.	Died.	Remaining.	Admitted.	Total.	Discharged.	Transferred.	Liberated.	Died.	Remaining.	Admitted.	Total.	Discharged.	Transferred.	Liberated.	Died.	Remaining.	Admitted.	Total.	Discharged.	Transferred.	Liberated.	Died.	Remaining.	Admitted.	Total.	Discharged.	Transferred.	Liberated.	Died.	Remaining.					
Apoplexy,	2	2	4	3	"	"	1	"	"	5	5	1	1	"	3	"	2	2	1	"	"	1	"	4	4	1	"	2	1	2	13	15	6	1	"	7	1				
Asthma,	4	29	33	23	"	"	4	"	5	23	28	15	"	2	7	4	3	24	257	21	"	"	2	4	3	22	25	17	1	"	3	4	15	98	113	76	2	"	16	17	
Cholera,	"	24	24	18	1	"	3	2	2	63	65	58	"	2	5	"	151	151	99	3	"	43	6	6	59	65	44	1	"	20	"	8	297	305	219	7	"	71	8		
Diarrhoea,	44	280	324	253	5	2	16	48	48	280	328	273	1	2	12	40	40	498	538	439	9	"	38	52	54	580	634	469	20	"	3	64	78	136	1638	1824	1434	35	"	130	218
Dropsy,	"	2	2	"	"	"	2	"	"	1	1	1	"	"	"	"	4	4	1	"	"	3	"	7	7	2	"	1	2	"	"	7	14	14	4	"	1	7	2		
Dysentery,	31	232	263	228	"	"	12	23	22	211	233	179	1	1	18	34	34	392	426	324	1	1	28	72	72	374	446	311	5	2	73	55	159	1209	1368	1042	7	4	131	184	
Dysury,	4	2	6	4	"	"	"	2	2	2	4	1	"	"	1	2	2	6	8	6	"	"	2	2	6	8	3	"	1	3	1	10	16	26	14	"	1	4	7		
Dislocations and Sprains,	1	8	9	6	"	"	1	"	2	12	14	14	"	"	"	"	5	5	3	"	"	2	2	5	7	7	"	"	"	"	5	30	35	30	"	1	"	4	4		
Fractures,	37	197	234	188	"	1	11	34	31	236	267	216	"	3	5	43	18	439	457	383	"	1	5	68	39	109	148	120	1	2	7	18	125	981	1106	907	1	7	28	163	
Fevers, { Continued,	68	482	550	469	9	2	13	57	51	593	644	556	15	1	18	54	80	956	1056	822	27	5	39	143	140	604	744	615	36	6	37	50	739	2635	2974	2462	87	14	107	304	
Fevers, { Remittent,	31	244	275	236	"	"	2	37	27	242	269	223	"	1	4	41	32	131	163	145	"	4	3	11	40	304	344	310	"	"	3	31	130	921	1051	914	"	5	12	120	
Fevers, { Intermittent,	52	349	401	352	2	"	8	39	58	564	622	547	"	1	8	66	75	1059	1134	854	7	1	17	255	257	905	1102	1008	6	7	32	109	442	2877	3319	2762	15	9	65	469	
Hepatic Affections, { Hepatitis, Acute,	1	4	5	4	"	"	1	"	1	3	4	4	"	"	"	"	15	15	14	"	"	1	"	"	"	"	"	"	"	"	2	22	24	22	"	"	2	"			
Hepatic Affections, { Hepatitis, Chronic,	1	3	4	2	"	"	1	"	1	5	6	5	"	"	"	1	1	1	1	"	"	"	"	"	"	"	"	"	"	"	3	8	11	8	"	"	1	2			
Hepatic Affections, { Icterus,	"	1	1	"	"	"	"	"	1	1	2	3	2	"	"	"	2	2	2	"	"	"	"	"	"	"	"	"	"	"	1	5	6	4	"	"	1	1			
Inflammations, .. { External,	2	23	25	23	"	"	1	1	1	21	22	18	"	1	2	1	10	11	7	"	"	"	4	5	13	18	11	"	"	4	3	9	67	76	59	"	1	6	10		
Inflammations, .. { Thoracic,	2	20	22	19	"	"	"	3	3	10	13	11	"	"	2	3	22	25	20	"	"	3	2	2	57	59	40	"	"	10	9	10	109	119	90	"	"	13	16		
Inflammations, .. { Enteritic,	12	13	25	10	2	"	2	11	1	13	14	6	1	"	7	3	8	11	9	"	"	1	1	1	5	6	4	"	"	1	1	17	39	56	29	3	1	4	19		
Mania,	12	23	35	16	2	1	1	15	24	38	62	39	6	2	1	14	15	30	45	13	7	3	"	22	21	28	49	21	7	1	1	19	72	119	191	89	22	7	3	70	
Ophthalmic Affections, { Acute,	5	24	29	23	"	"	"	6	10	67	77	56	3	1	17	19	74	93	68	6	1	1	17	17	39	56	43	3	1	3	6	51	204	255	190	12	3	4	46		
Ophthalmic Affections, { Chronic,	9	22	31	22	1	"	"	8	8	27	35	23	"	1	1	10	12	32	44	28	"	"	2	14	11	35	46	28	"	"	7	11	40	116	156	101	1	1	10	43	
Phthisis Pulmonalis,	2	5	7	4	1	"	"	2	2	8	10	6	"	"	2	2	8	10	5	"	"	3	2	2	15	17	8	"	1	6	2	8	36	44	23	1	1	11	8		
Rheumatism,	31	220	251	207	"	4	3	37	37	207	244	208	5	"	3	28	216	244	200	5	"	4	35	35	231	266	203	8	1	5	49	131	874	1005	818	18	5	15	149		
Spleen,	2	5	7	5	"	"	2	"	"	8	6	6	"	"	2	1	3	4	3	"	"	1	"	"	3	3	1	"	"	1	1	3	19	22	15	"	"	4	3		
Syphilis,	4	53	57	45	"	"	1	11	14	36	50	37	2	1	1	9	10	50	60	51	"	1	7	"	7	28	35	25	1	"	2	7	35	167	202	158	3	2	5	34	
Small-pox,	"	30	30	26	"	"	"	4	4	13	17	17	"	"	"	"	"	"	"	"	"	"	"	2	2	2	"	"	"	"	"	4	45	49	45	"	"	"	4		
Ulcers,	146	998	1144	970	6	2	2	164	172	1277	1449	1196	25	8	"	4	216	216	1953	2169	1837	45	5	11	271	271	1199	1470	1271	23	5	8	163	805	5427	6232	5274	99	20	25	814
Wounds,	55	175	230	177	"	4	5	44	43	240	283	234	9	7	2	31	31	284	315	243	9	5	3	55	55	194	249	189	6	7	9	38	184	893	1077	843	24	23	19	168	
Other diseases,	61	412	473	381	2	7	9	74	72	414	486	409	2	6	13	56	56	516	572	492	"	5	12	63	64	361	425	353	"	3	14	55	253	1703	1956	1635	4	21	48	248	
Total,	619	3882	4501	3714	32	24	160	631	642	4621	5263	4361	73	38	110	681	682	6890	7572	6091	119	32	222	1108	1106	5189	6295	5106	118	4	317	712	3041	6582	23631	19272	342	136	749	3132	



TABLE IV.

Abstract of the General Quarterly Returns of the Sick in Jail Hospitals, throughout the Presidencies of Fort William and Agra, during the year 1833 ; intended to exhibit the diseases, which principally prevail among prisoners in these territories.

Diseases.	Average strength of Prisoners in the Lower Provinces, 19,420.							Average Strength of Prisoners in the Upper Provinces, 20,238.							Total Average Strength of Prisoners, 39,658.									
	Remaining.	Admitted.	Total.	Discharged.	Transferred.	Liberated.	Died.	Remaining.	Admitted.	Total.	Discharged.	Transferred.	Liberated.	Died.	Remaining.	Remaining.	Admitted.	Total.	Discharged.	Transferred.	Liberated.	Died.	Remaining.	
Apoplexy,	4	7	11	4	"	"	3	4	2	13	15	6	1	"	7	1	6	20	26	10	1	"	10	5
Asthma,	46	160	206	148	1	2	19	36	15	98	113	76	2	2	16	17	61	258	319	224	3	4	35	53
Cholera,	85	1112	1197	547	1	33	515	101	8	297	305	219	7	"	71	8	93	1409	1502	766	8	33	586	109
Diarrhoea,	277	2194	2471	1937	1	14	236	283	186	1638	1824	1434	35	7	130	218	463	3832	4295	3371	36	21	366	501
Dropsy,	89	327	416	230	"	5	82	99	"	14	14	4	"	1	7	2	89	341	430	234	"	6	89	101
Dysentery,	413	2485	2898	1980	5	95	380	438	159	1209	1368	1042	7	4	131	184	572	3694	4266	3022	12	99	511	622
Dysury,	11	87	98	81	"	"	1	16	10	16	26	14	"	1	4	7	21	103	124	95	"	1	5	23
Dislocations and Sprains,	12	60	72	61	2	"	9	5	30	25	30	"	"	1	4	17	90	107	91	2	1	"	13	
Fractures,	10	45	55	38	"	1	3	13	125	981	1106	907	1	7	28	163	135	1026	1161	945	1	8	31	176
Fevers, { Continued,	379	3321	3700	3055	2	160	158	325	339	2635	2974	2462	87	14	107	304	718	5956	6674	5517	89	174	265	629
Fevers, { Remittent,	84	552	636	513	"	2	23	98	136	921	1051	914	"	5	12	120	214	1473	1687	1427	"	7	35	218
Fevers, { Intermittent,	635	4535	5170	4411	"	25	146	588	442	2877	3319	2761	15	9	63	469	1077	7412	8489	7172	15	34	211	1057
Hepatic Affections, { Hepatitis, Acute,	15	185	198	183	"	"	5	10	2	22	24	22	"	"	2	"	17	205	222	205	"	"	7	10
Hepatic Affections, { " Chronic,	6	62	68	61	"	"	"	7	3	8	11	8	"	"	1	2	9	70	79	69	"	"	1	9
Hepatic Affections, { Icterus,	9	46	55	49	"	"	1	5	1	5	6	4	"	"	1	1	10	51	61	53	"	"	2	6
Inflammations, { External,	19	110	129	108	1	2	2	16	9	67	76	59	"	1	6	10	28	177	205	167	1	3	8	26
Inflammations, { Thoracic,	56	240	296	199	"	"	41	56	10	109	119	90	"	13	16	66	349	415	289	"	7	2	5	41
Inflammations, { Enteritic,	21	74	95	67	4	1	1	22	17	39	56	29	3	1	4	19	38	113	151	96	"	2	5	41
Mania,	96	143	239	109	26	4	6	94	72	119	191	89	22	7	3	70	168	262	430	198	48	11	9	164
Ophthalmic Affections, { Acute,	18	93	111	94	"	"	1	16	51	204	255	190	12	3	4	46	69	297	366	284	12	3	5	62
Ophthalmic Affections, { Chronic,	20	85	105	79	"	1	"	25	40	116	156	101	1	1	10	43	60	201	261	180	1	2	10	68
Phthisis Pulmonalis,	32	127	159	95	1	2	30	31	8	36	44	23	1	11	8	40	163	203	118	2	3	41	39	
Rheumatism,	201	1026	1227	960	2	42	1	222	131	874	1005	818	18	5	15	149	332	1900	2232	1778	20	47	16	371
Spleen,	47	175	222	161	"	3	9	49	3	19	22	15	"	"	4	3	50	194	244	176	"	3	13	52
Syphilis,	89	341	430	320	1	22	1	86	35	167	202	158	3	2	5	34	124	508	632	478	4	24	6	120
Small-pox,	32	176	208	143	"	9	21	35	4	45	49	45	"	"	"	4	36	221	257	188	"	9	21	39
Ulcers,	1137	4435	5572	4258	2	130	83	1099	805	5427	6232	5274	99	20	25	814	1942	9862	11804	9532	101	150	108	1913
Wounds,	130	714	844	698	5	7	15	111	184	893	1077	843	24	23	19	168	314	1607	1921	1541	29	30	34	287
Other diseases,	883	5889	6772	5764	2	34	81	891	253	1703	1956	1635	4	21	48	248	1136	7592	8728	7399	6	55	129	1139
Total,	4856	28804	33660	26353	56	594	1864	4793	3049	20582	23631	19272	342	136	749	3132	7905	49386	57291	45635	398	730	2613	7915

TABLE V.

Abstract shewing the number of Prisoners, the proportion of Sick to Well, and Ratio of Deaths per cent., in the Jails throughout the Presidencies of Bengal and Agra, during the year 1833; intended to illustrate the Comparative Mortality, which prevails among the Prisoners in the Upper and Lower Provinces.

	Average strength of prisoners, during the four quarters of the year.	Average admissions, during the four quarters of the year.	Proportion of sick to well.	Number of deaths.		Total deaths, during the year.	Ratio per cent. of deaths to strength by ordinary diseases.	Ratio per cent. of deaths to strength by Cholera.	General ratio per cent. of deaths to strength.
				By ordinary diseases.	By Cholera Morbus.				
Lower Provinces, including the Dinapore Circle, }	19,420	7,138	1 to $2\frac{3}{4}$	1,349	515	1,864	6.94	2.65	9.60
Upper Provinces,	20,238	5,155	1 to 4	679	70	749	3.35	0.35	3.70
Total, ...	39,658	12,293	1 to $3\frac{1}{4}$	2,028	585	2,613	5.11	1.47	6.59

TABLE VI.

Abstract showing the Strength, the proportion of Sick to Well, and Ratio of Deaths per cent., among Native Troops, during the year 1833; intended to exhibit the Comparative Salubrity of particular stations or districts, and likewise the rate of mortality prevailing among this class of persons, compared with Native Prisoners or European Troops.

Stations.	Average strength, during the year.	Average admissions, during the year.	Proportion of sick to well.	Number of deaths.		Total deaths, during the year.	Ratio per cent. of deaths from ordinary diseases.	Ratio per cent. of deaths from Cholera Morbus.	General ratio of deaths to strength.
				By ordinary diseases.	By Cholera Morbus.				
Presidency,~~~	1405	144	1 to 10	76	6	82	5.43	0.43	5.86
Barrackpore,~	9649	814	1 to 11½	186	2	188	1.94	0.02	1.96
Berhampore,~	5762	290	1 to 20	72	4	76	1.26	0.07	1.33
Dinapore,~~~	4280	187	1 to 22	50	4	54	1.18	0.09	1.27
Benares,~~~~	5169	263	1 to 20	36	4	40	0.70	0.08	0.78
Allahabad,~~~	6000	284	1 to 21	21	12	33	0.35	0.20	0.55
Cawnpore,~~~	12980	488	1 to 26	67	31	98	0.50	0.24	0.74
Meerut,~~~~~	12728	466	1 to 27	79	1	80	0.71	„	0.71
Agra,~~~~~	5269	182	1 to 29	40	„	40	0.78	„	0.78
Kurnaul,~~~~	7304	225	1 to 32	56	2	58	0.77	0.03	0.80
Saugor,~~~~~	6367	329	1 to 19	41	3	44	0.64	0.03	0.67
Neemuch,~~~~	13162	566	1 to 23	155	7	162	1.18	0.05	1.23
Total,~~~	90075	4238	1 to 21	879	76	955	0.97½	0.08½	1.06

TABLE VII.

Abstract shewing the Strength, the proportion of Sick to Well, and Ratio of Deaths per cent., among European Troops, during the year 1833; intended to exhibit the Comparative Salubrity of particular stations or districts, and likewise the rate of mortality prevailing among this class of persons, compared with Native Prisoners or Native Troops.

Stations.	Average strength, during the year.	Average admissions, during the year.	Proportion of sick to well.	Number of deaths.		Total deaths, during the year.	Ratio per cent. of deaths from ordinary diseases.	Ratio per cent. of deaths from Cholera Morbus.	General ratio of deaths to strength.
				By ordinary diseases,	By Cholera Morbus.				
Presidency,~~~	709	115	1 to 6	51	5	56	7.30	0.70	8.0
Dum-Dum,~~~	772	131	1 to 6	47	7	54	6.14	0.90	7.04
Chinsurah,~~~	577	88	1 to 7	42	7	49	7.60	1.20	8.80
Berhampore,~~~	811	92	1 to 9	34	3	37	4.25	0.37	4.62
Dinapore,~~~~	1020	128	1 to 8	54	5	59	5.35	0.48	5.83
Benares,~~~~~	1277	172	1 to 7	65	13	78	5.08	1.0	6.08
Allahabad,~~~	112	27	1 to 4	6	0	6	0.0	5.36	5.36
Cawnpore,~~~	2057	395	1 to 5	73	103	176	3.63	5.0	8.63
Meerut,~~~~~	1995	157	1 to 13	40	3	43	2.0	0.15	2.15
Agra,~~~~~	1089	96	1 to 11	25	2	27	2.40	0.18	2.58
Kurnaul,~~~~~	1166	73	1 to 16	30	3	33	2.60	0.35	2.95
Saugor,~~~~~	89	23	1 to 4	2	0	2	2.20	0.0	2.20
Neemuch,~~~~~	325	54	1 to 6	20	2	22	7.0	0.60	7.60
Total,~~~	11999	1551	1 to 7½	489	153	642	4.07	1.27	5.34

